Compact Disc Player CD753

/00 /01 /14

Service
Service
Service

Service Manual

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Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

CLASS 1 LASER PRODUCT

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GB 4822 725 26026

CS 53 132

PHILIPS

TECHNICAL SPECIFICATION

General

Dimensions (WxHxD) : 435 x 86 x 265mm
Weight : 2,9kg

Accessories

Instruction for use : 4822 736 16255 for /00
: 4822 736 16256 for /01
: 4822 736 16257 for /14

Remote control : 4822 219 10538

Mains voltage

/00 : 220-230V(±10%) 50Hz
/01 : 120/230V(±15%) 50/60Hz
/14 : 220-230V(±10%) 50Hz

Power consumption

stand by : ≤5W
operating : approx. 8W

Audio performance

Number of channels : 2
Output voltage (Line out) : 2V$_{RMS}$ ±3dB
Unbalance left-right : ≤1dB
Frequency response : 20Hz-20kHz ≤0,4dB
Signal to noise ratio : 108 dB typ.
Dynamic range : 105dB typ. at 1kHz
THD : ≤0,0063% at 1kHz
Channel separation : 98dB typ. at 1kHz

Headphone output

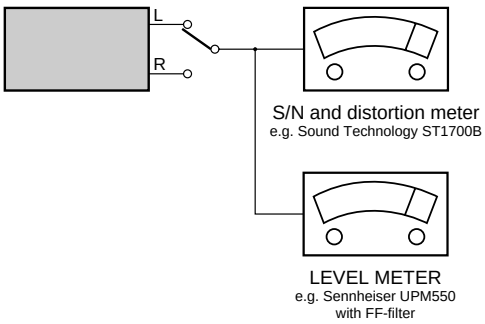
Output level (1kHz, 0dB) : ≥5V$_{RMS}$
Unbalance left-right : ≤1,2dB
Output impedance : 120Ω
Load impedance : 32Ω - 600Ω
Output power : 25mW at 32Ω
: 52mW at 120Ω
: 29mW at 600Ω

Laser

Output power : <5mW (3mW typ.)
Wavelength : 780nm

Measurement setup

Use Audio Signal disc SBC429 4822 397 30184

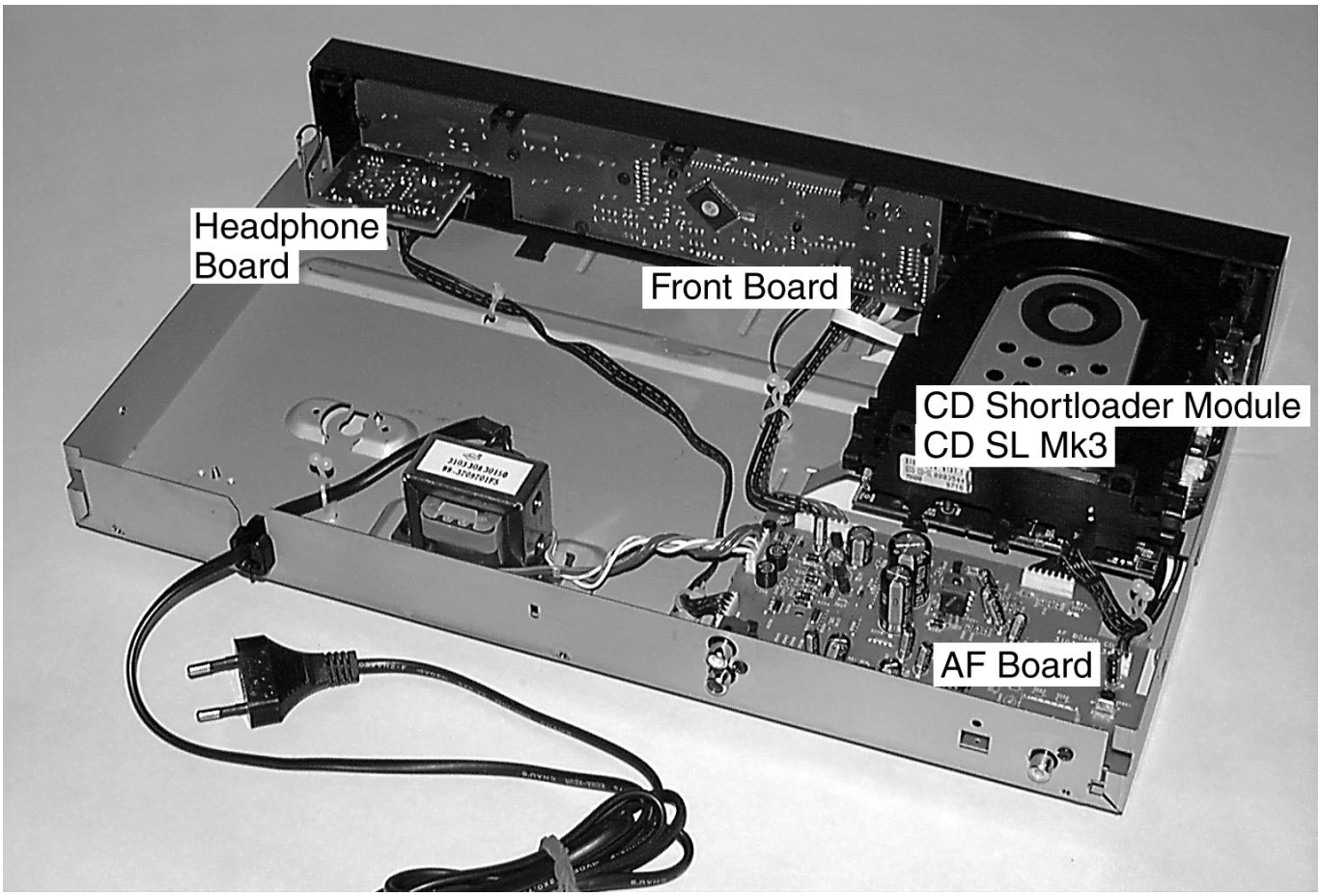


RC 5 Commands

System code = 20

Command	Code	Command	Code	Command	Code
KEY "0"	0	DISPLAY SCROLL	15	SHUFFLE	28
KEY "1"	1	PLAY	53	HIGHLIGHT	43
KEY "2"	2	STOP	54	REPEAT	29
KEY "3"	3	PAUSE	48	FADE	120
KEY "4"	4	TIME	11	VOLUME UP	16
KEY "5"	5	PREVIOUS	33	VOLUME DOWN	17
KEY "6"	6	REVIEW	50	STAND BY	12
KEY "7"	7	CUE	52	CD TEXT	88
KEY "8"	8	PROGRAM	36	NEXT	32
KEY "9"	9	REPEAT A/B	59		

LOCATION OF PRINTED CIRCUIT BOARDS



ESD

(GB) WARNING
All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handling during repair can reduce life drastically.
When repairing, make sure that you are connected with the same potential as the mass of the set via a wristband with resistance. Keep components and tools at this potential.

(F) ATTENTION
Tous les IC et beaucoup d´autres semi-conducteurs sont sensibles aux décharges statiques (ESD). Leur longévite pourrait être considérablement écourtée par le fait qu´aucune précaution nést prise à leur manipulation.
Lors de réparations, s´assurer de bien être relié au même potentiel que la masse de l´appareil et enfileer le bracelet serti d´une résistance de sécurité.
Veiller à ce que les composants ainsi que les outils que l´on utilise soient également à ce potentiel.

(D) WARNUNG
Alle ICs und viele andere Halbleiter sind empfindlich gegenüber elektrostatischen Entladungen (ESD).
Unsorgfältige Behandlung im Reparaturfall kann die Lebensdauer drastisch reduzieren.
Sorgen Sie dafür, daß sie im Reparaturfall über ein Pulsarmband mit Widerstand mit dem Massepotential des Gerätes verbunden sind.
Halten Sie Bauteile und Hilfsmittel ebenfalls auf diesem Potential.

(NL) WAARSCHUWING
Alle IC´s en vele andere halfgeleiders zijn gevoelig voor electrostatische ontladingen (ESD).
Onzorgvuldig behandelen tijdens reparatie kan de levensduur drastisch doen vermindern. Zorg ervoor dat u tijdens reparatie via een polsband met weerstand verbonden bent met hetzelfde potentiaal als de massa van het apparaat.
Houd componenten en hulpmiddelen ook op ditzelfde potentiaal.

(I) AVVERTIMENTO
Tutti IC e parecchi semi-conduttori sono sensibili alle scariche statiche (ESD).
La loro longevità potrebbe essere fortemente ridatta in caso di non osservazione della più grande cauzione alla loro manipolazione. Durante le riparationi occorre quindi essere collegato allo stesso potenziale che quello della massa delápparecchio tramite un braccialetto a resistenza.
Assicurarsi che i componenti e anche gli utensili con quali si lavora siano anche a questo potenziale.

(GB) AVAILABLE ESD PROTECTION EQUIPMENT :

anti-static table mat	large	1200x650x1.25mm	4822 466 10953
	small	600x650x1.25mm	4822 466 10958
anti-static wristband			4822 395 10223
connection box (3 press stud connections, 1MΩ)			4822 320 11307
extendible cable (2m, 2MΩ, to connect wristband to connection box)			4822 320 11305
connecting cable (3m, 2MΩ, to connect table mat to connection box)			4822 320 11306
earth cable (1MΩ, to connect any product to mat or to connection box)			4822 320 11308
KIT ESD3 (combining all 6 prior products - small table mat)			4822 310 10671
wristband tester			4822 344 13999

SAFETY

(GB)
Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.
Safety components are marked by the symbol ⚠

(F)
Les normes de sécurité exigent que l`appareil soit remis à l`état d`origine et que soient utilisées les pièces de rechange identiques à celles spécifiées.
Les composants de sécurité sont marqués ⚠

(D)
Bei jeder Reparatur sind die geltenden Sicherheitsvorschriften zu beachten. Der Originalzustand des Gerätes darf nicht verändert werden. Für Reparaturen sind Originalersatzteile zu verwenden.
Sicherheitsbauteile sind durch das Symbol ⚠ markiert.

(NL)
Veiligheidsbepalingen vereisen, dat het apparaat in zijn oorspronkelijke toestand wordt teruggebracht en dat onderdelen, identiek aan de gespecificeerde, worden toegepast.
De Veiligheidsonderdelen zijn aangeduid met het symbool ⚠

(I)
Le norme di sicurezza estigono che l´apparecchio venga rimesso nelle condizioni originali e che siano utilizzati i pezzi di ricambiago identici a quelli specificati.
Componenty di sicurezza sono marcati con ⚠

(GB) **DANGER**: Invisible laser radiation when open.
AVOID DIRECT EXPOSURE TO BEAM.

CLASS 1
LASER PRODUCT

(S) Varning !
Osynlig laserstrålning när apparaten är öppnad och spärren är urkopplad. Betrakta ej strålen.

(DK) Advarsel !
Usynlig laserstråling ved åbning når sikkerhedsafbrydere er ude af funktion. Undgå udsaettelse for stråling.

(SF) Varoitus !
Avatussa laitteessa ja suojalukituksen ohitettaessa olet alttiina näkymättömälle laserisäteilylle. Älä katso säteeseen !

(GB)
After servicing and before returning the set to customer perform a leakage current measurement test from all exposed metal parts to earth ground, to assure no shock hazard exists.
The leakage current must not exceed 0.5mA.

(F)
"Pour votre sécurite, ces documents doivent être utilisés par des spécialistes agréés, seuls habilités à réparer votre appareil en panne".

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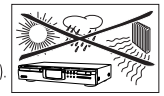
COMPACT disc DIGITAL AUDIO · COMPACT disc DIGITAL AUDIO Recordable · COMPACT disc DIGITAL AUDIO ReWritable · COMPACT disc DIGITAL AUDIO TEXT

Maintenance

Clean the CD player with a soft, slightly dampened lint-free cloth. Do not use any cleaning agents as they may have a corrosive effect.

Do not expose the CD player, batteries or CDs to humidity, rain, sand or excessive heat (caused by heating equipment or direct sunlight).

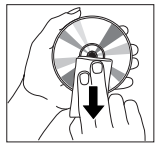


This CD player can play all kinds of Audio Discs such as CD-Recordables, CD-Rewriteables and CD-Text CDs. Do not try to play a CD-ROM, CD-I, CDV or computer CD.

If the CD player cannot read CDs correctly use a commonly available cleaning CD to clean the lens before taking the CD player to repair. Other cleaning methods may destroy the lens. Always keep the tray closed to avoid dust on the lens.

The lens may cloud over when the CD player is suddenly moved from cold to warm surroundings. Playing a CD is not possible then. Leave the CD player in a warm environment until the moisture evaporates.

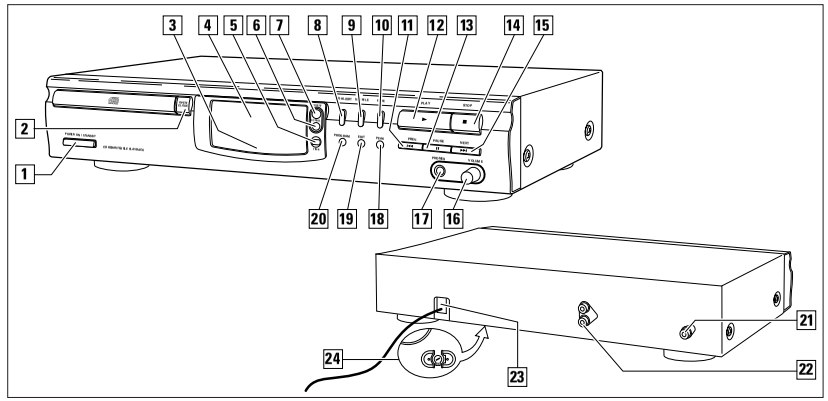
To clean a CD, wipe it in a straight line from the center toward the edge using a soft, lint-free cloth. A cleaning agent may damage the disc! Never write on a CD or attach a sticker to it.



Technical data

Subject to modification without notice.

Standby power consumption	< 5W
Frequency range	20–20,000Hz
Amplitude linearity	< 0.5dB (1kHz, -90dB)
Dynamic range	100dB (1kHz)
Signal-to-noise ratio	108dB (1kHz, A-weighted)
Channel separation	98dB (1kHz)
Total harmonic distortion	0.004%, -88dB (1kHz)
Audio output	2V RMS ±3dB, 1kΩ
Digital coaxial output	75Ω acc. IEC 958
Impedance headphones	30–600Ω (5V e. m. f. from 120Ω)
Dimensions	435 × 86 × 265mm
Weight	2.9kg



Controls on the front

1 **POWER ON / STANDBY** ... switches the CD player on and to standby
2 **OPEN·CLOSE** ... opens and closes the CD tray
3 Sensor for the infrared remote control
4 Display
5 **TIME** ... switches through the different time information
6 **SCROLL** ... scrolls CD-Text information
7 **CD TEXT** ... switches through the different CD-Text information
8 **HIGHLIGHT** ... plays the beginning of each track or – if a CD-Text disc contains highlights – the highlights of a CD
9 **SHUFFLE** ... plays a CD or a program in random order
10 **FADE** ... fades CD play out and in
11 **PREV.** ⏮ ... selects the beginning of the current or a previous track, and searches backward
12 **PLAY** ▶ ... starts CD play
13 **PAUSE** ⏸ ... interrupts CD play
14 **STOP** ■ ... stops CD play and clears a program
15 **NEXT** ⏭ ... selects the beginning of a subsequent track, and searches forward
16 **VOLUME** ... decreases or increases the volume level of the headphones
17 **PHONES** ... 6.3mm headphone socket
18 **PEAK** ... searches the loudest passage of a CD
19 **EDIT** ... changes the settings for recording on tape or CD-Recordable
20 **PROGRAM** ... programs track numbers

Connections at the back

21 **DIGITAL OUT** ... to connect the digital input of a digital audio device
22 **LINE OUT L R** ... to connect the audio input of an amplifier
23 Mains lead ... After all other connections have been made, connect this mains lead to the wall socket.

At the bottom

24 **VOLTAGE SELECTOR** ... (Not on all versions.) Disconnect the mains lead first, if this selector must be reset.

Accessories

This CD player is supplied including:
– a remote control
– 2 batteries for the remote control
– a connection cable
– this instruction booklet

Connections

Usual connection, LINE OUT

1 Insert the red plug of the supplied connection cable into R and the other plug into L.

2 Insert the other side of the cable into the corresponding sockets of the CD or AUX input of your amplifier.

Important!

*You may also use the TUNER or TAPE, but **never** the PHONO input of your amplifier!*

Digital connection, DIGITAL OUT

Never connect this socket to a non-digital input – such as AUX, CD, PHONO, TAPE – of an amplifier. This output supplies a digital signal and can therefore only be connected to a digital input.

1 Insert an optional coaxial cable into DIGITAL OUT.

2 Insert the other side of the cable into the digital input of your digital device (e. g. CD Recorder).

Mains

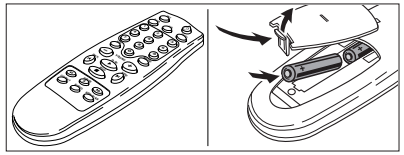
The type plate is located on the back of the CD player.

1 If your set is equipped with a VOLTAGE selector (at the bottom), set this selector to your local mains voltage if necessary. *Position 120V includes 110V–127V. Position 230V includes 220V–240V.*

2 Connect the mains cable to the wall socket. This switches on the mains supply.

Note: To disconnect the CD player from the mains completely, remove the mains plug from the wall socket.

Remote control



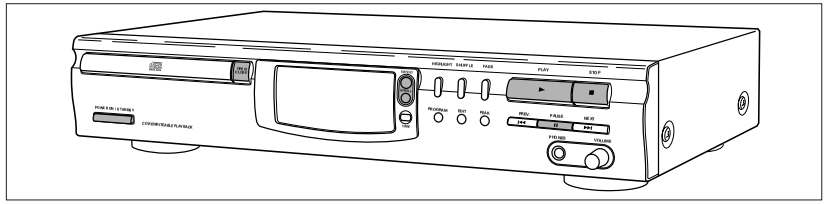
Batteries

- Open the battery compartment of the remote control and insert 2 alkaline batteries, type **AAA** (R03, UM-4).

Remove batteries if they are flat or the remote control is not going to be used for a long time.

Batteries contain chemical substances, so they should be disposed of properly.

TIME .....switches through the different time informations
⏻ .....switches the CD player to standby
PROGRAM .....programs track numbers
FADE .....fades CD play out and in
SHUFFLE .....plays a CD or a program in random order
Digits **1**–**0** .....selects a track by number
HIGHLIGHT .....plays the beginning of each track or – if a CD-Text disc contains highlights – the highlights of a CD
REPEAT .....repeats a track, a program or the entire CD
VOLUME – .....decreases the volume level
VOLUME + ...increases the volume level
PLAY ▶ .....starts CD play
PREV. ⏮ .....selects the beginning of the current or a previous track
NEXT ⏭ .....selects the beginning of a subsequent track
STOP ■ .....stops CD play and clears a program
◀◀ .....searches backward
PAUSE ⏸ .....interrupts CD play
▶▶ .....searches forward
CD TEXT .....switches through the different CD-Text information
SCROLL .....scrolls CD-Text information
REPEAT A/B .....repeats a selected part of the CD



CD-Text

This CD player can show information which is stored on CD-Text discs. It will only reproduce the text which is recorded on the disc.

1 When inserting a disc with CD-Text the display shows **CD TEXT** and performing artist or group. In case there are various artists the album title is shown.

2 Press CD TEXT before playing a CD to switch between album title and performing artist(s) if available.

3 Press CD TEXT during CD play to switch between album title, performing artist(s) and track title if available.

4 At the beginning of a new track the track title is scrolled once. Then the first 12 digits of the track title are displayed.

5 CD-Text information is scrolled every 30 seconds. Press SCROLL to scroll the text through the display any time.

Playing a CD

1 Use POWER ON / STANDBY to switch on the CD player.

2 Press OPEN·CLOSE to open the CD tray.
OPEN appears on the display.

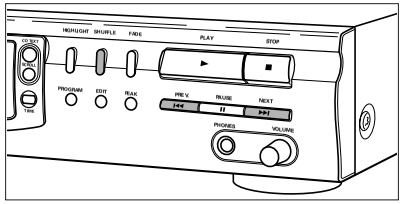
3 Insert an audio CD (printed side up) and press OPEN·CLOSE to close the CD compartment.
READING appears on the display. Then the number of tracks and the playing time is shown. If the disc contains CD-Text the display shows **CD TEXT** and CD-Text information (see "CD-Text").

4 Press PLAY ▶ to start CD play.
The display shows ⁞-, **TRACK**, **TIME**, and the number and time of the actual track. If the disc contains CD-Text the display shows CD-Text information.

- You can interrupt CD play by pressing PAUSE ⏸.
The display shows ⁞⁞ and the track number and time where playback was stopped.
- Continue CD play by pressing PAUSE ⏸ again.

5 Press STOP ■ to stop CD play.

Note: Playback will also stop if the end of the CD is reached.



Selecting a track and searching

Selecting a track during CD play

- Briefly press PREV. ⏮ or NEXT ⏭ (PREV. ⏮ or NEXT ⏭ on the remote control) once or several times to skip to the beginning of the current, previous or subsequent track(s).

or

- Use the digits **1**–**0** on the remote control to key in the number of a track.

  CD play continues with the selected track.

Selecting a track when CD play is stopped

1 Briefly press PREV. ⏮ or NEXT ⏭ (PREV. ⏮ or NEXT ⏭ on the remote control) once or several times.

or

- Use the digits **1**–**0** on the remote control to key in the number of a track.

2 Press PLAY ▶ to start CD play.

Playback starts with the selected track.

Searching for a passage during CD play

1 Hold down PREV. ⏮ or NEXT ⏭ (◀◀ or ▶▶ on the remote control) to find a particular passage in a backward or forward direction.

CD play continues at a low volume.

2 Release the button when you have reached the desired passage.

Note: In the shuffle and repeat mode and when playing a program, searching is only possible within the particular track.

Random order playing (SHUFFLE)

1 Press SHUFFLE before or during CD play to start shuffle play.

SHUFFLE is shown in the display. All the tracks of the CD (or program if available) will now be played in random order.

2 Press SHUFFLE again to return to normal CD play.

Repeating the CD, a track or a program

1 Press repeatedly REPEAT on the remote control during CD play.

The display shows the different repeating modes.
REPEAT 1: the current track is played repeatedly.
REPEAT: the entire CD or program (if available) is played repeatedly.

2 Press REPEAT until the display indication disappears to return to normal CD play.

Note: It is possible to activate the different playing modes at the same time, e. g. you can repeatedly play the entire CD or program in random order (**PROGRAM REPEAT SHUFFLE**).

Repeating a part of the CD

1 Press PLAY ▶ to start CD play.

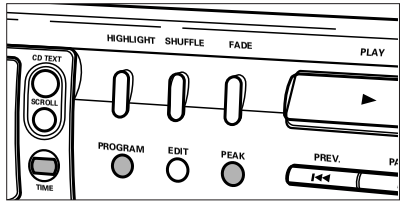
2 Press REPEAT A/B on the remote control to mark the beginning of the passage to be repeated.

REPEAT is shown and **A-** is flashing in the display.

3 Press REPEAT A/B on the remote control to mark the end of the passage to be repeated.

REPEAT A-B is shown in the display. The part of the CD between the marked points is played repeatedly.

4 Press PLAY ▶ to return to normal CD play.



Programming track numbers

You can select a number of tracks and store these in the memory in the desired sequence. You can store any track more than once. At most, 30 tracks can be stored in the memory.

1 Press PROGRAM to start programming.

PROGRAM flashes.

Note: If you press PROGRAM while playing a CD, the actual track will be added to the program.

2 Press PREV. ⏮ or NEXT ⏭ (PREV. ⏮ or NEXT ⏭ on the remote control) to select the desired track.

or

- Key in the number of a track with the digits **1**–**0** on the remote control.

3 Press PROGRAM to store the track number.

TRACK, **TOTAL TIME**, and the number of the programmed track is displayed. The number of programmed tracks is increased and the time of the track is added to the total time of the program.

4 Repeat steps 2 and 3 for all tracks to be programmed.

5 Press STOP ■ to end programming.

PROGRAM lights permamently.

- It is possible to review the program using the PREV. ⏮ or NEXT ⏭ (PREV. ⏮ or NEXT ⏭ on the remote control). You can add more tracks by pressing PROGRAM like you have done before.

6 Press PLAY ▶ to start program play.

Note: If you try to store more than 30 tracks PROGRAM FULL *scrolls through the display.*

Clearing the program

1 If necessary press STOP ■ to stop program playing.

2 Press STOP ■ to clear the program.

PROGRAM CLEARED scrolls through the display, **PROGRAM** disappears and your program is cleared.

Note: The program will also be cleared if you open the tray.

Loudest passage searching

You can search for the loudest passage of a CD or program. This will help you in adjusting your recording device if required.

1 If necessary press STOP ■ to stop CD play.

2 Press PEAK to start searching.

PEAK starts flashing. Searching may need a few minutes. Then 4 seconds of the loudest passage are played repeatedly.

- You can interrupt peak play by pressing PAUSE ⏸ Continue peak play by pressing PAUSE ⏸ again.

3 Press STOP ■ to stop playing.

or

- Press PLAY ▶ to start CD play.

Time display

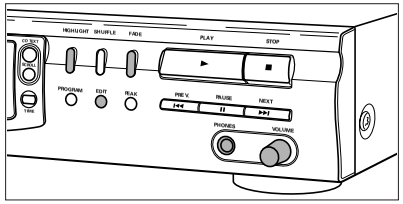
You can display time information which is stored on the CD.

While playing a CD or a program the number and elapsed time of the actual track, and **TIME** are displayed. If the disc contains CD-Text the display shows CD-Text information (see "CD-Text").

- Press TIME several times to display:

  If the disc contains CD-Text, the number and elapsed time of the actual track, and **TIME** are displayed first.
  The number and remaining time of the actual track, and **REM TIME**.
  The number of the actual track, the total elapsed time of the CD, and **TOTAL TIME**.
  The number of the actual track, the total remaining time of the CD, and **TOTAL REM TIME**.

Note: If you press TIME when the CD is not playing you may only display the total time of the CD.



Fading out and in

You can fade out and in CD play, e. g. to stop and start a recording softly.

1 Press FADE during CD play to fade out.
The display shows ▮▮▮ in steps. The volume is lowered continuously until CD play is paused.

2 Press FADE again to fade in.
The display shows ▮▮▮ in steps. CD play starts and the volume is raised continuously to its previous level.

Note: You may use FADE anytime when CD play is paused to fade in.

Volume adjustment

The volume of the CD player can be adjusted. This affects the DIGITAL OUT output as well.

• Press VOLUME – or VOLUME + on the remote control.
The volume of the CD player is lowered or raised. The display shows the actual value between VOLUME MIN and VOLUME MAX.

Important!

VOLUME –/+ is altering the signal of the output. Before recording set the volume to VOLUME MAX and do not change during recording.

Locking the volume

It is possible to lock the output volume to its maximum. This affects the DIGITAL OUT output as well. Locking the volume can be usefull when recording from the CD-player.

• Keep EDIT pressed for more than 2 seconds.

If the voulme was unlocked:
The display shows VOLUME FIXED and the volume is locked.

If the voulme was locked:
The display shows VOLUME MAX and the volume is unlocked.

Note: If you press VOLUME –/+ and the volume is locked the display shows VOLUME FIXED.

Headphone listening

1 Connect your headphones to the 6.3mm PHONES socket.

2 Use VOLUME to adjust the volume of the headphones.

Note: The maximum volume on the headphones is set through VOLUME –/+ on the remote control.

Important!

The volume of the headphones is in line with the volume of the output. Therefore do not use VOLUME –/+ during recording.

Scanning the CD

It is possible to listen to the beginning of each track of a CD or program. You can choose whether to play 10, 20 or 30 seconds of each track. If a disc contains CD-Text highlights this part of the tracks is scanned and HIGHLIGHT is displayed.

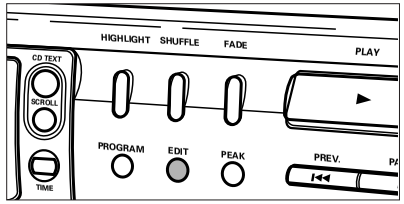
1 Press HIGHLIGHT repeatedly to switch through the different scan modes.
HIGHLIGHT, SCAN 10, SCAN 20, SCAN 30, SCAN OFF... (SCAN OFF aborts the scan function).

2 As soon as the desired scan mode is displayed do not press the button again.
After 1 second scanning starts. The number and remaining time of the actual track, and **REM TIME** are displayed.

• You can interrupt scan by pressing PAUSE ▮▮. Continue scan by pressing PAUSE ▮▮ again.

3 Press STOP ■ to stop scanning.
or
• Press PLAY ▶ to start CD play with the actual track.

Note: If you press HIGHLIGHT while SHUFFLE is active, shuffle will be stopped before scanning.



Recording setup

It is possible to set up the CD player in a way that it will calculate which tracks will fit on your recording media. It is only possible to use the edit function if a disc has not more than 29 tracks.

If you use NORMAL the recording stops after the last track that fits on one side of your recording media. Notice that CD-Recordables are single-sided only! If you use OPTIMAL some tracks will be skipped to minimise the unused space on your recording media. The sequence of the tracks stays as the original.

1 Insert a CD and, if desired, program track numbers.

2 Press EDIT to start the setup.
The display shows **EDIT** and NORMAL.

3 Press PREV. ⏮ or NEXT ⏭ (PREV. ⏮ or NEXT ⏭ on the remote control) to switch through the different scan modes.
NORMAL, OPTIMAL, STOP... (STOP aborts the edit function).

4 As soon as the desired edit mode is displayed press EDIT.
The display shows C 90. ➢

5 Press PREV. ⏮ or NEXT ⏭ (PREV. ⏮ or NEXT ⏭ on the remote control) to switch through the different recording times and media.
C 100, C 120, CDR 21, CDR 60, CDR 74, C 30, C 45, C 60, C 90...

Note: C is for cassette, CDR is for CD-Recordable and CD-Rewriteable and therefore for single-sided recording only.

6 As soon as the desired recording time and media is displayed press EDIT.
A, the number of tracks and the playing time are displayed.

7 Start your recording and press PLAY ▶ to start CD play.
If cassette (C) was selected the CD player pauses after playing the calculated tracks for side A. If CD-Recordable (CDR) was selected the CD player stops.

8 If required switch tape sides.

9 Press PLAY ▶ to start CD play again.
B, the number of tracks and the playing time are displayed. The remaining tracks for side B are played.

Note: It is possible to switch between A and B by using PREV. ⏮ or NEXT ⏭ (PREV. ⏮ or NEXT ⏭ on the remote control).

Environmental information

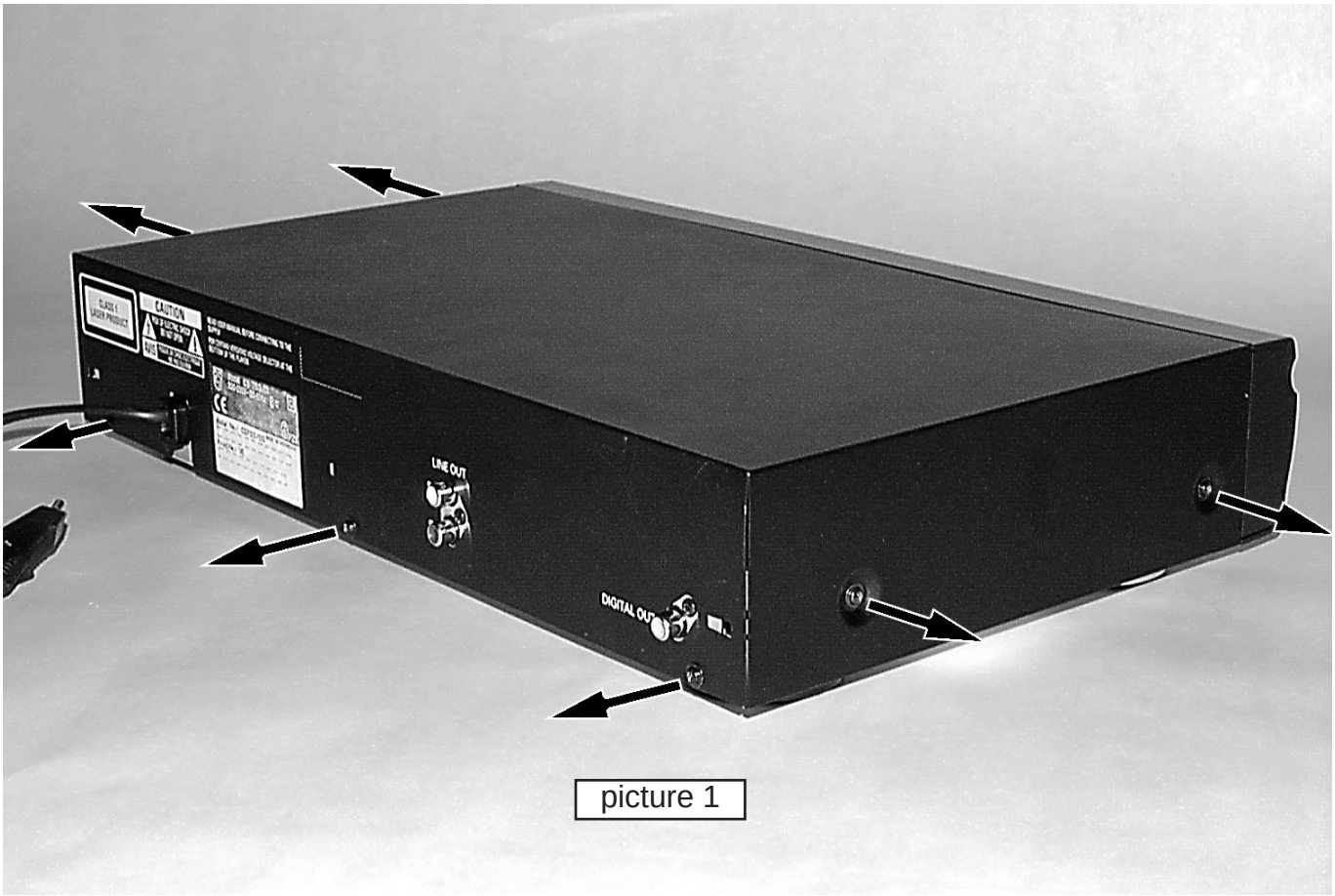
All redundant packing material has been omitted. We have done our utmost to make the packaging easily separable into three mono materials: cardboard (box), polystyrene foam (buffer) and polyethylene (bags, protective foam sheet).

Your set consists of materials which can be recycled if disassembled by a specialized company. Please observe the local regulations regarding the disposal of packing materials, exhausted batteries and old equipment.

MECHANICAL INSTRUCTIONS

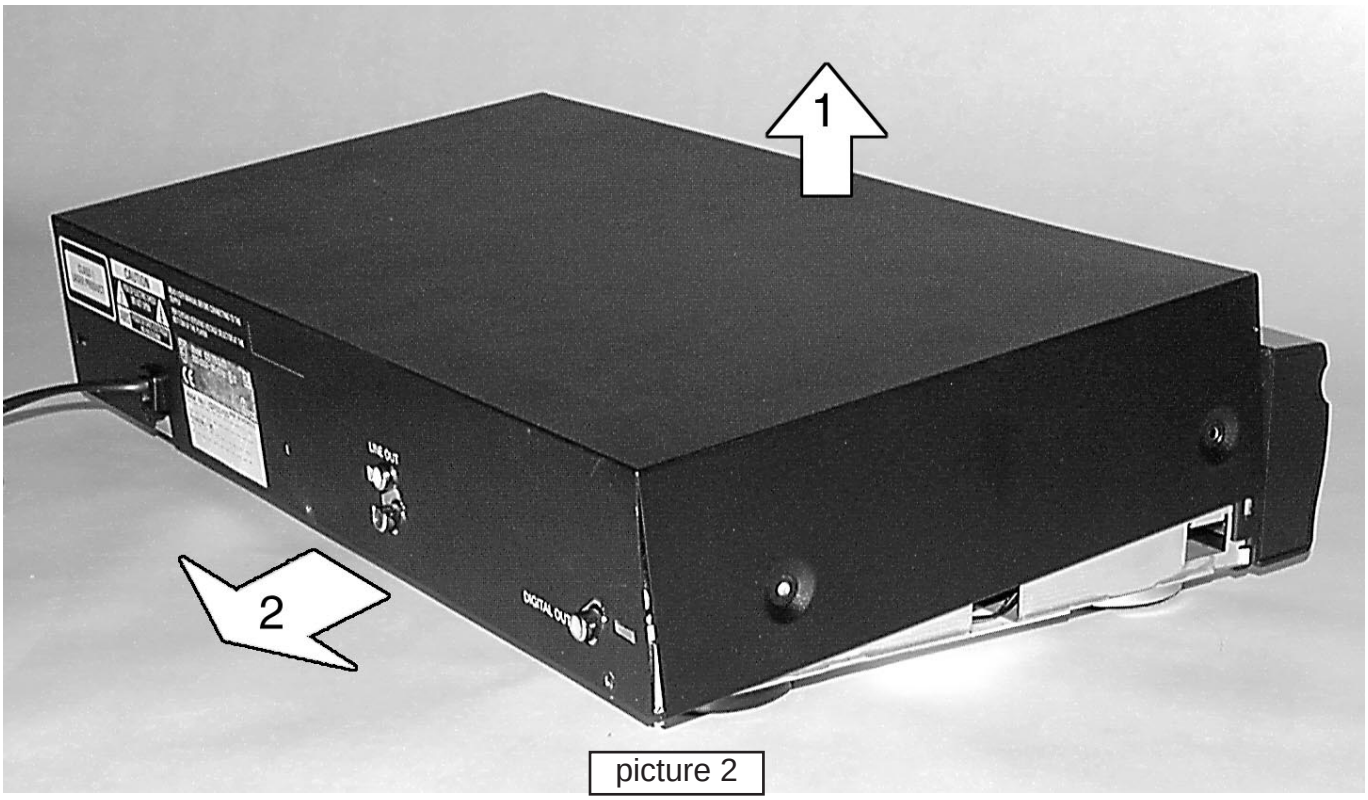
Dismantling Top Cover

1) Loosen 7x screw as shown in picture 1.



picture 1

2) Lift top cover as shown in picture 2.
3) Remove top cover.

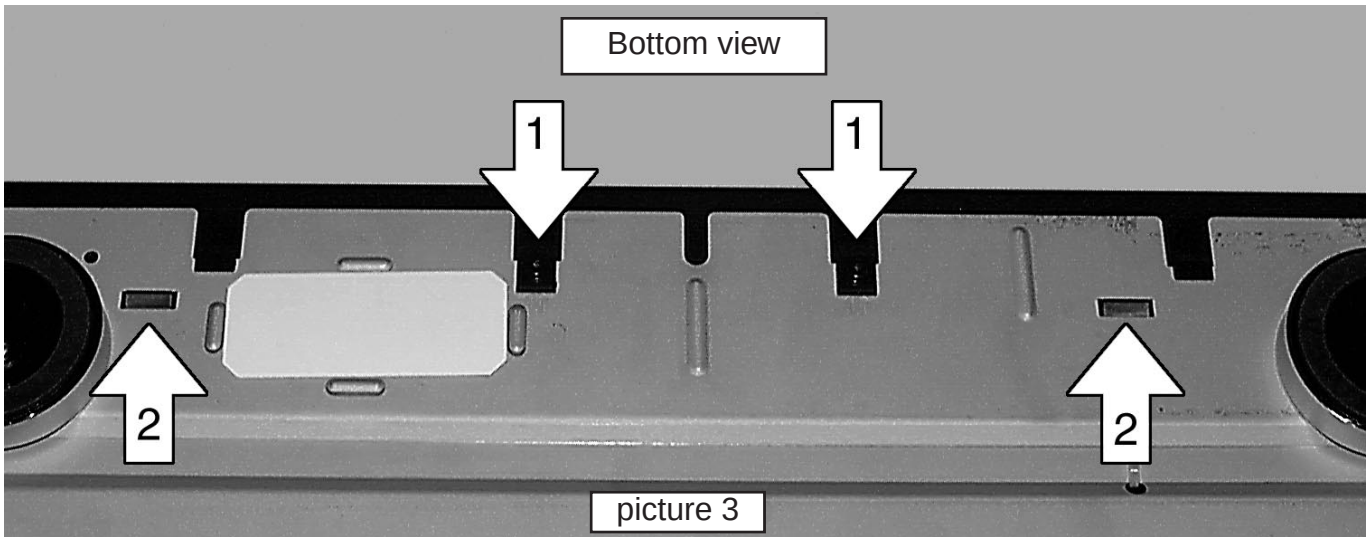


picture 2

MECHANICAL INSTRUCTIONS

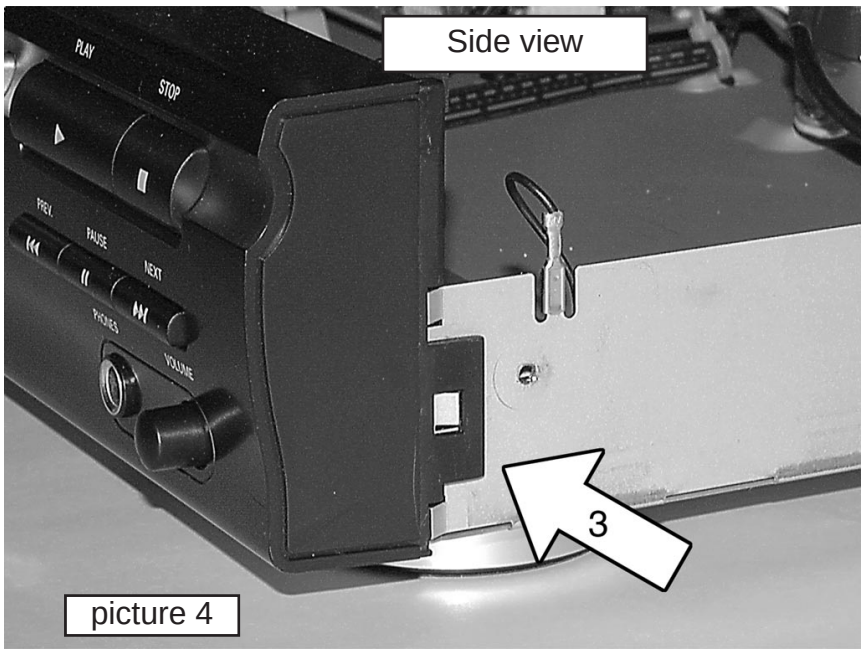
Dismantling Front

1) Loosen 2x screw as shown in picture 3.



picture 3

2) Release 2x snap on bottom (see picture 3).
3) Release 2x snap on side (see picture 4).
4) Remove front.



picture 4

Dismantling hints CD Short Loader

Dismantling the tray

a) Press open/close button to open the tray. If the tray doesn´t work, use a small screwdriver as shown in Fig.1 step 1 to move the tray outside. After the first centimetre it is possible to pull the tray out by hand.

b) Release two snaps and remove tray.

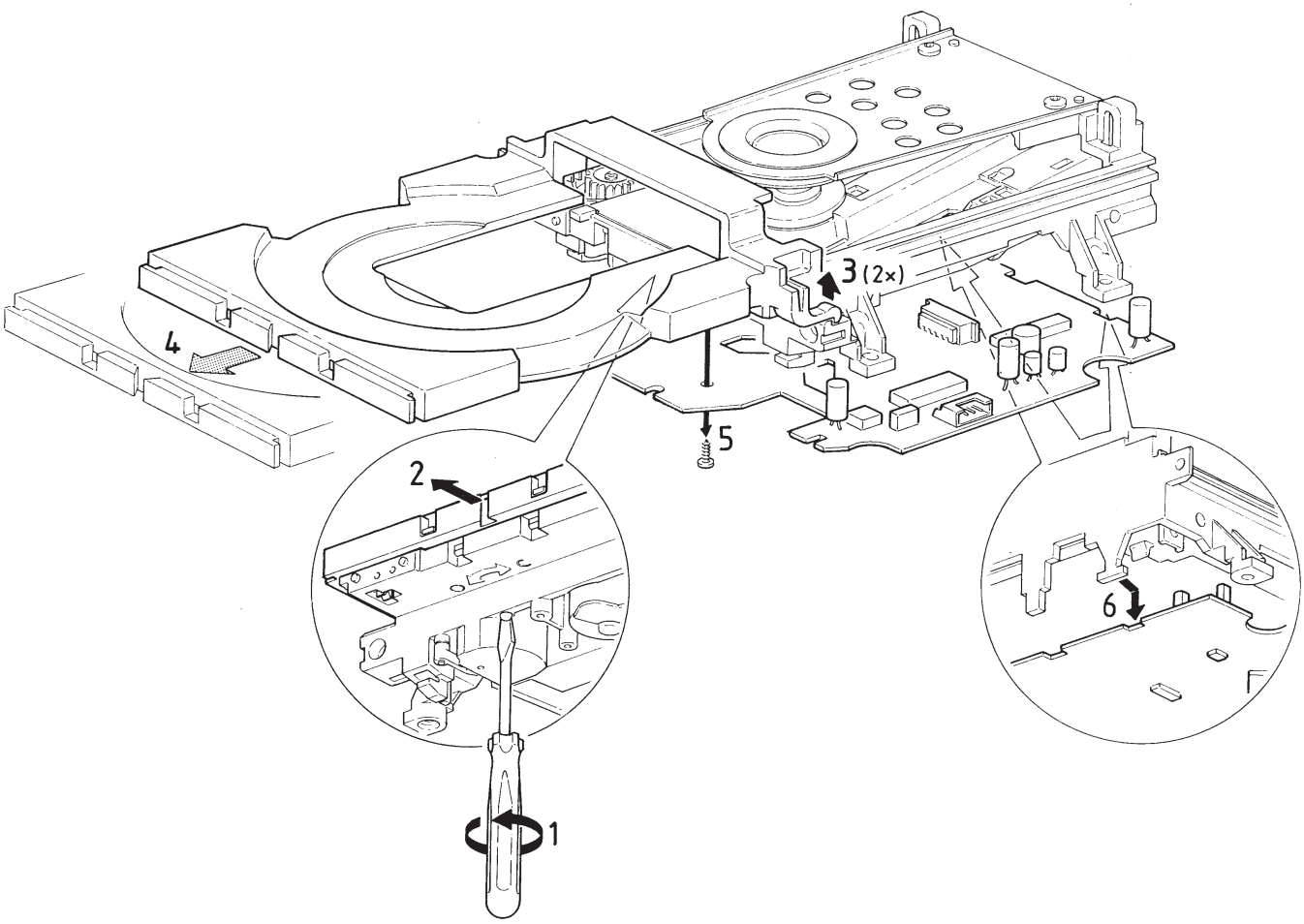


Fig. 1

Assembly of gear

a) Use a pin (e.g. a paperclip) to align the cam wheel (a) with the gear wheel (b). See Fig. 2.

b) Fix the wheels with the small plastic washers.

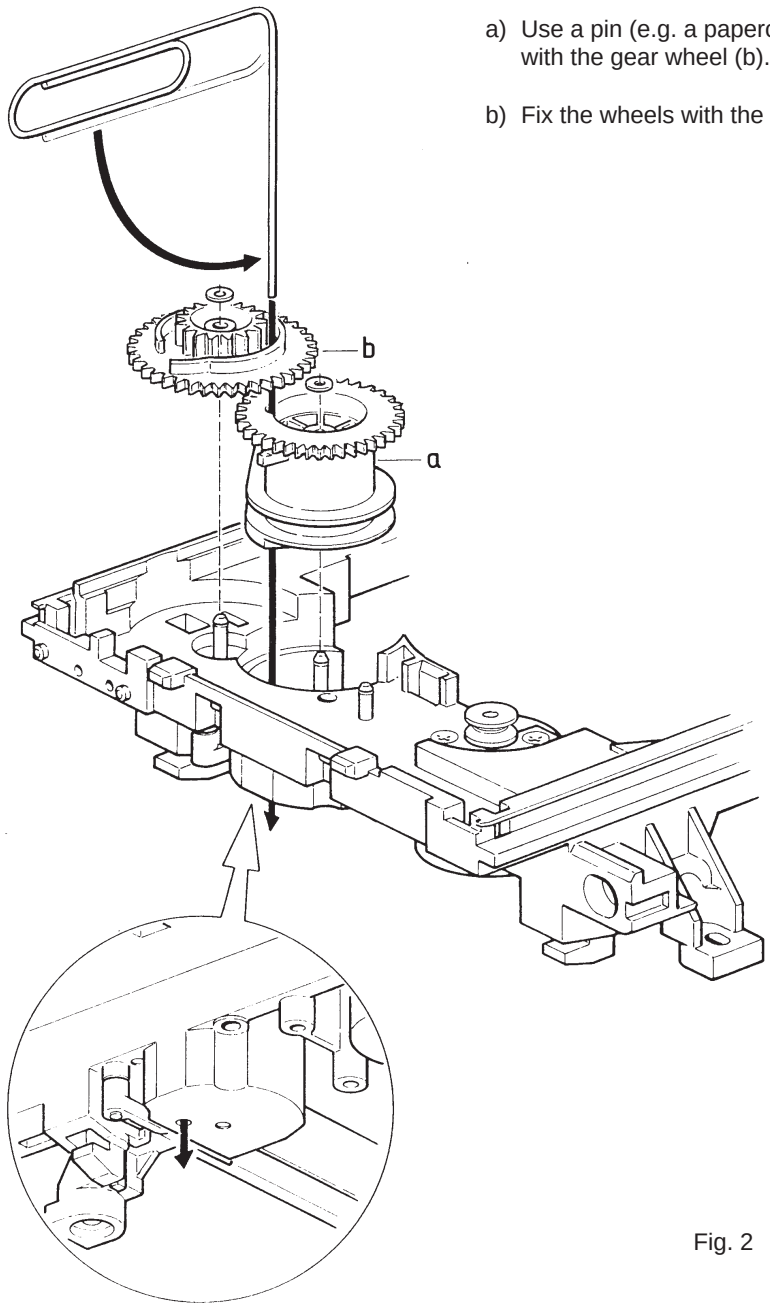


Fig. 2

c) Mount idle wheel 2 (c) and idle wheel 1 (d) in any position. See Fig. 3.

d) Fix the idle wheel 1 (d) with the small plastic washer.

e) Mount the driving belt.

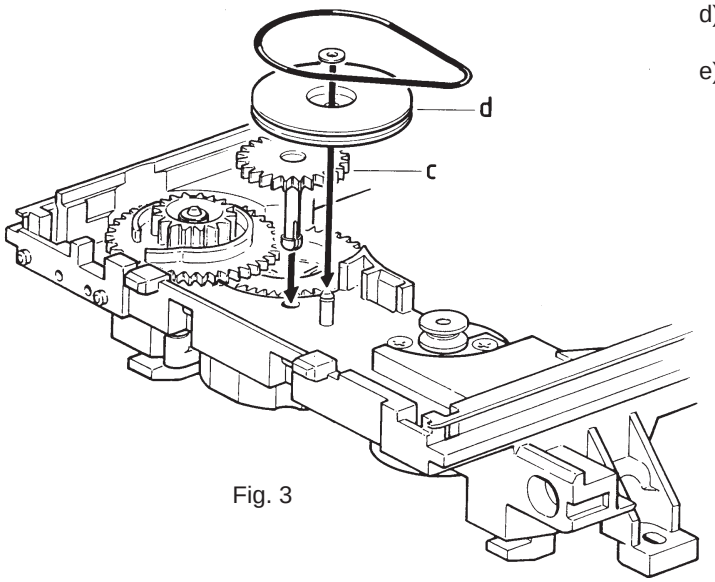


Fig. 3

f) Mount the pinion guiding assy and the cover as shown in Fig. 4.

g) Turn the gear wheel (b) counter clockwise to endposition.

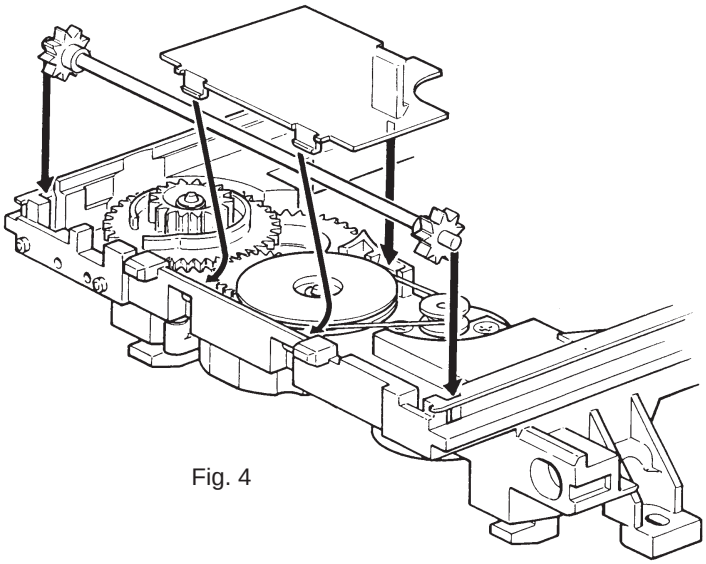


Fig. 4

h) Mount the CD Mechanism as shown in Fig. 5.

i) Mount the tray (Align the tray to the chassis and push it inside).

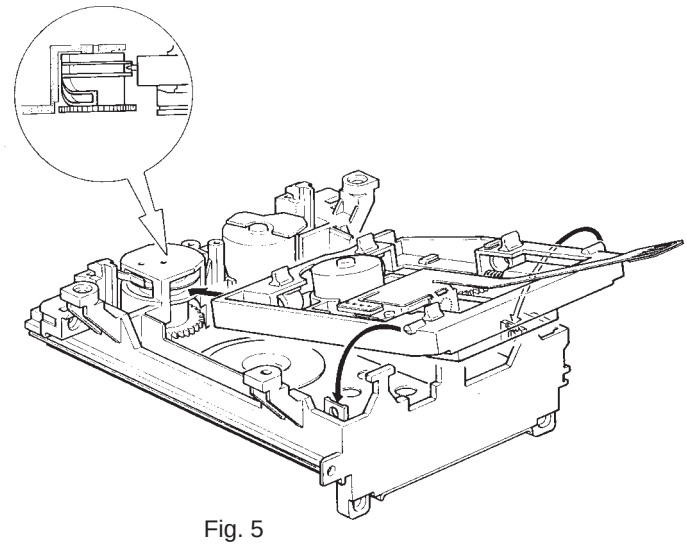


Fig. 5

Check if tray mechanism works correctly!

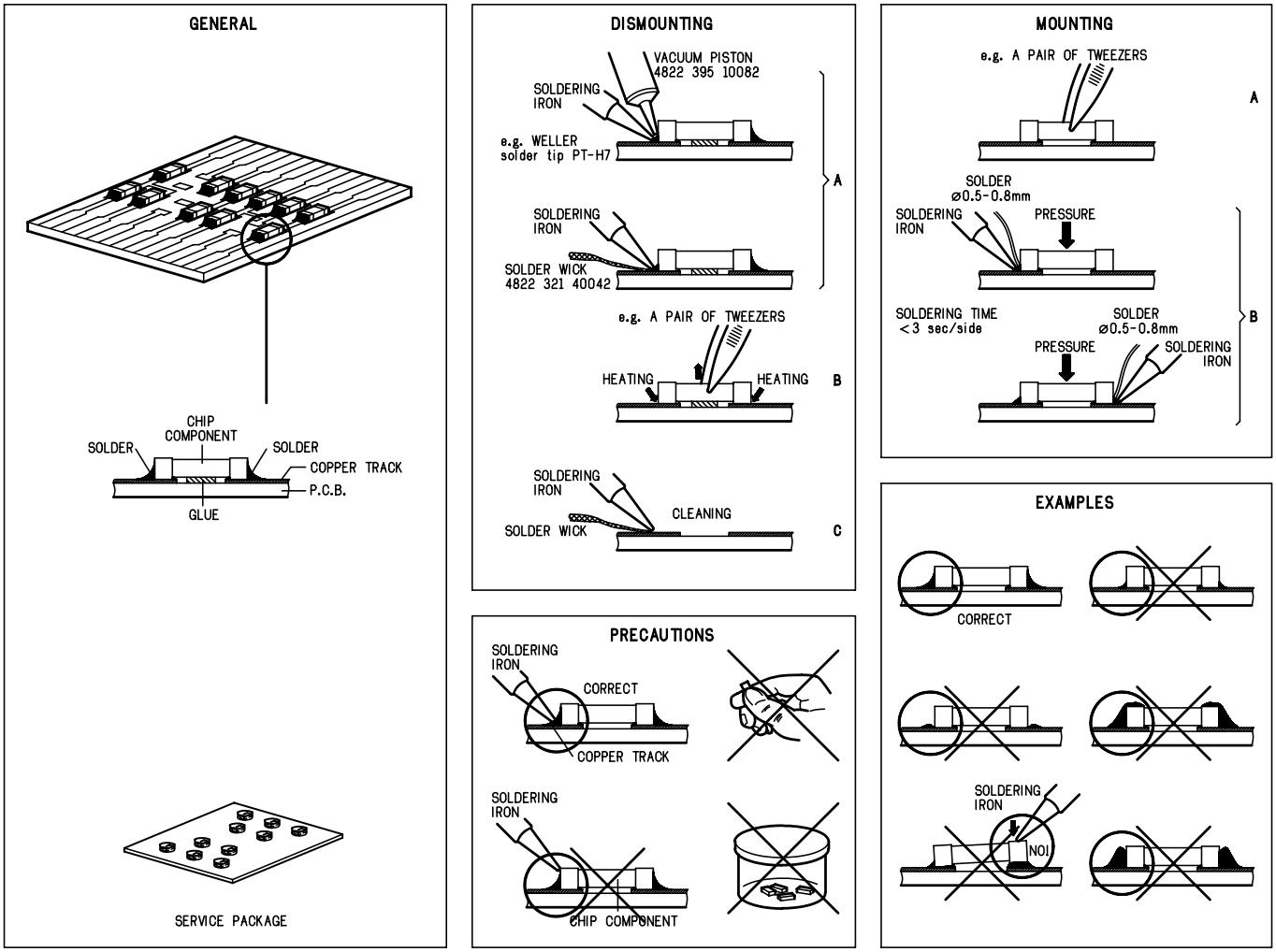
1) Turn the gear wheel (b) clockwise to its endposition (Use a small screwdriver as shown in Fig. 1 step 1).

   The tray has to move to inner position first and then the CD mechanism has to move to its upper position.

2) Turn the gear wheel (b) counter clockwise to its endposition.

   The CD Mechanism has to move to its lower position first and then the tray has to move outside.

HANDLING CHIP COMPONENTS



SERVICE TOOLS

TORX T10 screwdriver with shaftlength 150mm 4822 395 50423
TORX screwdriver set T6 - T20 SBC 163.....4822 395 50145

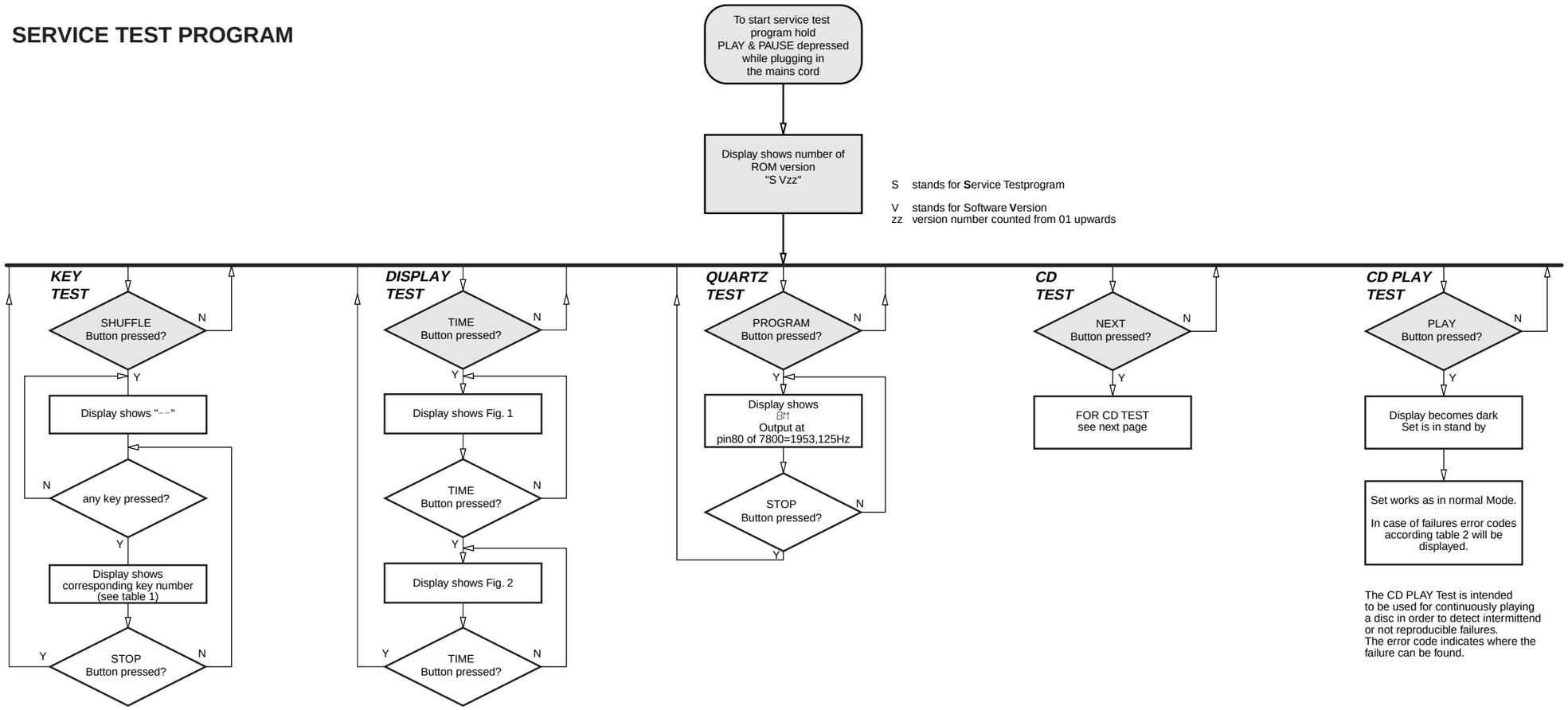
Audio signal disc SBC 429.....4822 397 30184

Playability test disc SBC444/444A.....4822 397 30245
Test disc 444 (disc without errors) +
Test disc 444A (disc with dropout errors, black spots and fingerprints)

Burn in test disc SBC442 .....4822 397 30155
(65 min. 1kHz signal at -30dB level without "pause")

5-2

SERVICE TEST PROGRAM


To start service test program hold PLAY & PAUSE depressed while plugging in the mains cord
Display shows number of ROM version "S Vzz"
S stands for Service Testprogram
V stands for Software Version
zz version number counted from 01 upwards
KEY TEST
SHUFFLE Button pressed?
Display shows "-- --"
any key pressed?
Display shows corresponding key number (see table 1)
STOP Button pressed?
DISPLAY TEST
TIME Button pressed?
Display shows Fig. 1
TIME Button pressed?
Display shows Fig. 2
TIME Button pressed?
QUARTZ TEST
PROGRAM Button pressed?
Display shows 8M1
Output at pin80 of 7800=1953,125Hz
STOP Button pressed?
CD TEST
NEXT Button pressed?
FOR CD TEST see next page
CD PLAY TEST
PLAY Button pressed?
Display becomes dark Set is in stand by
Set works as in normal Mode.
In case of failures error codes according table 2 will be displayed.
The CD PLAY Test is intended to be used for continuously playing a disc in order to detect intermittend or not reproducible failures. The error code indicates where the failure can be found.

KEY TEST

Key	Number	Key	Number	Key	Number
Next	1	Shuffle	7	Fade	13
Previous	2	Scan	8	Time	14
Play	3	Program	9	CD-Text	15
Stop	EXIT	Peak search	10	Scroll	16
Open/Close	5	Repeat	11	Stand by	17
Edit	6	Pause	12	any RC button	RC

Table 1

DISPLAY TEST

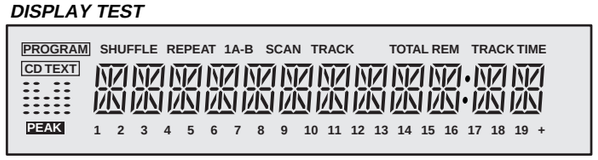


Fig. 1

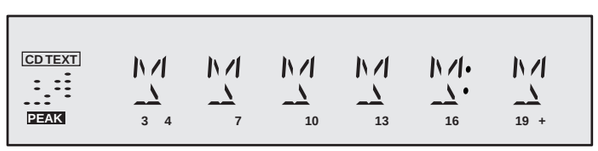


Fig. 2

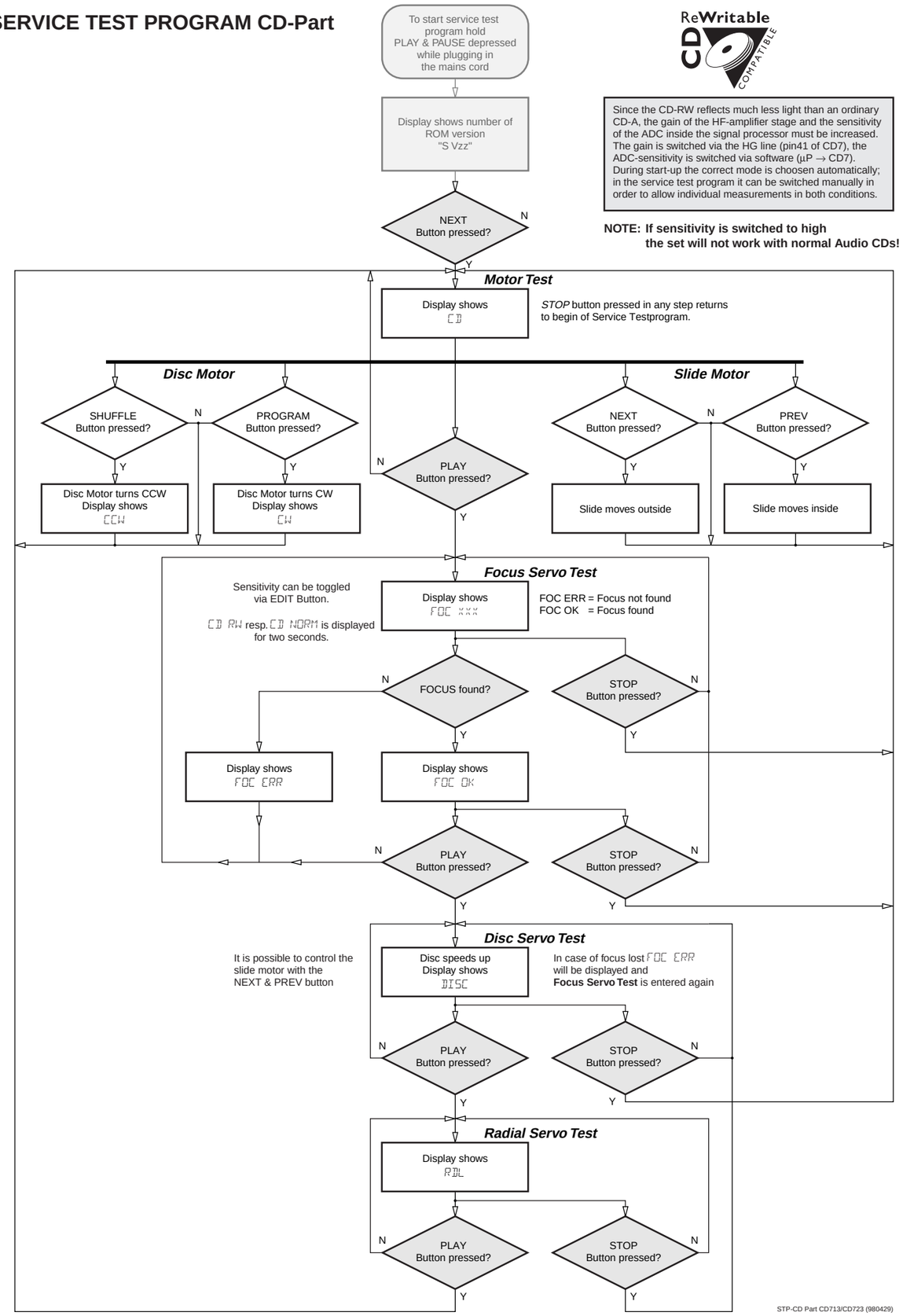
CD PLAY TEST

Error number	Type	Description
1000	W	**Focus error** Triggered when the focus could not be found within a certain time when starting up the CD or when the focus is lost for a certain time during playing the CD.
1001	W	**Radial error** Triggered when the radial servo is not on track for a certain time during playing the CD.
1002	W	**Slide in error** Generated when the slide did not reach its inner position (innerswitch is closed) before 6 seconds have passed by. Innerswitch or slide motor problem.
1003	W	**Slide out error** Generated when the slide did not come out of its inner position (innerswitch is open) before 250ms have passed by. Innerswitch or slide motor problem.
1005	W	**Jump error** Generated when the jump destination could not be found within a certain time.
1006	W	**Subcode error** No valid subcode for a certain time.
1007	W	**PLL error** The Phase -Lock-Loop could not lock within a certain time.
1008	W	**Turntable motor error** Generated when the CD could not reach 75% of speed during starting up within a certain time. Disc motor problem
1020	F	**Focus search error** Focus point has not been found within a certain time.

Table 2

W = Warning
Error number remains on display till next warning/error
F = Fatal error
Set stops playing → Error number remains on display

SERVICE TEST PROGRAM CD-Part


To start service test program hold PLAY & PAUSE depressed while plugging in the mains cord
Display shows number of ROM version "S Vzz"
NEXT Button pressed?
N
Y
Motor Test
Display shows CD
STOP button pressed in any step returns to begin of Service Testprogram.
Disc Motor
Slide Motor
SHUFFLE Button pressed?
PROGRAM Button pressed?
NEXT Button pressed?
PREV Button pressed?
Disc Motor turns CCW Display shows CCW
Disc Motor turns CW Display shows CW
PLAY Button pressed?
Slide moves outside
Slide moves inside
Focus Servo Test
Sensitivity can be toggled via EDIT Button.
CD RW resp. CD NORM is displayed for two seconds.
Display shows FOC xxx
FOC ERR = Focus not found
FOC OK = Focus found
FOCUS found?
STOP Button pressed?
Display shows FOC ERR
Display shows FOC OK
PLAY Button pressed?
STOP Button pressed?
Disc Servo Test
It is possible to control the slide motor with the NEXT & PREV button
Disc speeds up Display shows DISC
In case of focus lost FOC ERR will be displayed and Focus Servo Test is entered again
PLAY Button pressed?
STOP Button pressed?
Radial Servo Test
Display shows RDL
PLAY Button pressed?
STOP Button pressed?

STP-CD Part CD713/CD723 (980429)

ReWritable CD COMPATIBLE

Since the CD-RW reflects much less light than an ordinary CD-A, the gain of the HF-amplifier stage and the sensitivity of the ADC inside the signal processor must be increased. The gain is switched via the HG line (pin41 of CD7), the ADC-sensitivity is switched via software (µP → CD7). During start-up the correct mode is choosen automatically; in the service test program it can be switched manually in order to allow individual measurements in both conditions.

NOTE: If sensitivity is switched to high the set will not work with normal Audio CDs!

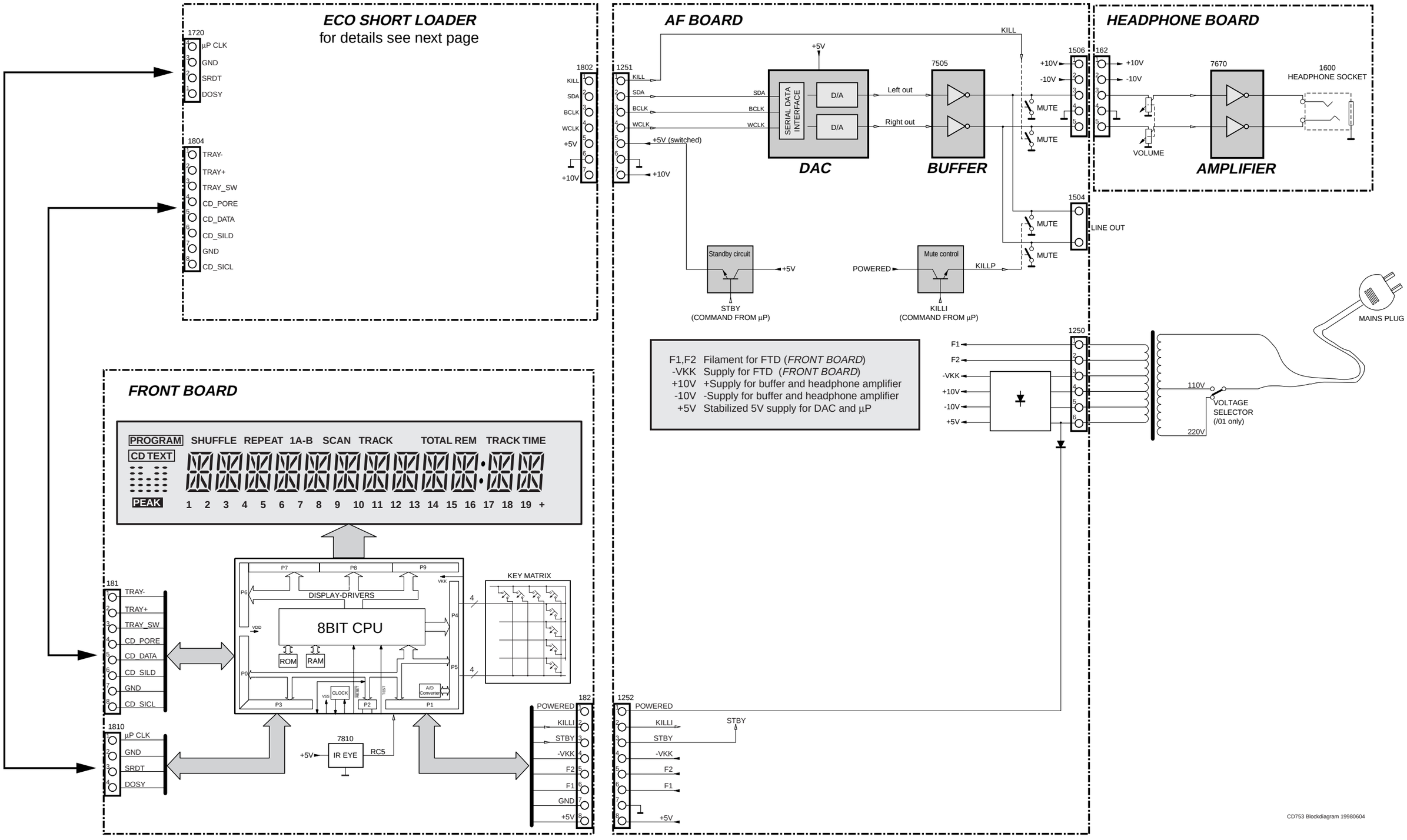
Abbreviations CD Part

SAA7372 – DECODER AND DIGITAL SERVO IC CD7

Pin	*Name*	*Direction*	*Description*
1	VSSA1	GND	supply (analog) of CD7
2	VDDA1	+4V	supply (analog) of CD7
3	D1	HF-preamp → CD7	unipolar current input (central diode signal input)
4	D2	HF-preamp → CD7	unipolar current input (central diode signal input)
5	D3	HF-preamp → CD7	unipolar current input (central diode signal input)
6	VRL	GND	reference input for ADC
7	D4	HF-preamp → CD7	unipolar current input (central diode signal input)
8	R1	HF-preamp → CD7	unipolar current input (satellite diode signal input)
9	R2	HF-preamp → CD7	unipolar current input (satellite diode signal input)
10	IREFT	→ CD7	current reference for calibration ADC
11	VRH	not connected	reference output from ADC
12	VSSA2	GND	supply (analog) of CD7
13	SELPLL	+4V	selects whether internal clock multiplier PLL is used
14	ISLICE	CD7 →	current feedback from data slicer
15	HFIN	→ CD7	comparator signal input
16	VSSA3	GND	supply (analog) of CD7
17	HFREF	→ CD7	comparator common mode input
18	IREF	→ CD7	reference current pin (nom. VDD/2)
19	VDDA2	+4V	supply (analog) of CD7
20	TEST1	GND	test control input
21	CRIN	X-Tal → CD7	crystal/resonator input
22	CDOUT	X-Tal → CD7	crystal/resonator output
23	TEST2	GND	test control input
24	CL16	not connected	16.9344MHz system clock output
25	CL11	not connected	11.2896MHz or 5.6448MHz clock output (3-state)
26	RA	CD7 → servo driver	radial actuator output
27	FO	CD7 → servo driver	focus actuator output
28	SL	CD7 → servo driver	slide actuator output
29	TEST3	GND	test control input
30	VDD1P	+4V	supply (digital) of CD7
31	DOBM	CD7 → digital output	bi-phase mark output (3-state)
32	VSS1	GND	supply (digital) of CD7
33	MOTO1	CD7 → servo driver	motor output1 of CD7; versatile (3-state)
34	MOTO2	CD7 → servo driver	motor output2 of CD7; versatile (3-state)
35	SBSY	not connected	subcode block sync (3-state)
36	SFSY	not connected	subcode frame sync (3-state)
37	RCK	GND	subcode clock input
38	SUB	not connected	P to W subcode bits (3-state)
39	VSS2	GND	supply (digital) of CD7
40	V5	not connected	versatile output pin of CD7
41	V4	not connected	versatile output pin of CD7
42	V3	not connected	versatile output pin of CD7 (open drain)
43	KILL	CD7 →	kill output; programmable (open drain)
44	MISC	not connected	C2 error flag; output only defined in CD-ROM modes (3-state)
45	DATA	CD7 → DAC	serial data output (3-state)
46	WCLK	CD7 → DAC	word clock output (3-state)
47	VDD2P	+4V	supply (digital) of CD7
48	BCLK	CD7 → DAC	serial bit clock output (3-state)
49	VSS3	GND	supply (digital) of CD7
50	CL4	not connected	4.2336MHz µP clock output
51	SDA	µP → CD7	µP interface data I/O line (open drain output)
52	SCL	µP → CD7	µP interface clock line
53	RAB	µP → CD7	µP interface R/W and load control line
54	SILD	µP → CD7	µP interface R/W and load control line
55	NC		no connection
56	VSS4	GND	supply (digital) of CD7
57	RESET	µP → CD7	power-on reset input (active low)
58	STATUS	not connected	servo interrupt request line/CD7 status register output (open drain)
59	VDD3C	+4V	supply core (digital)
60	C2FAIL	not connected	indication of correction failure (open drain)
61	CFLG	not connected	correction flag output (open drain)
62	V1	→ CD7	versatile input pin
63	V2	→ CD7	versatile input pin
64	LDON	CD7 → 7820	laser drive on output (open drain)

5-4

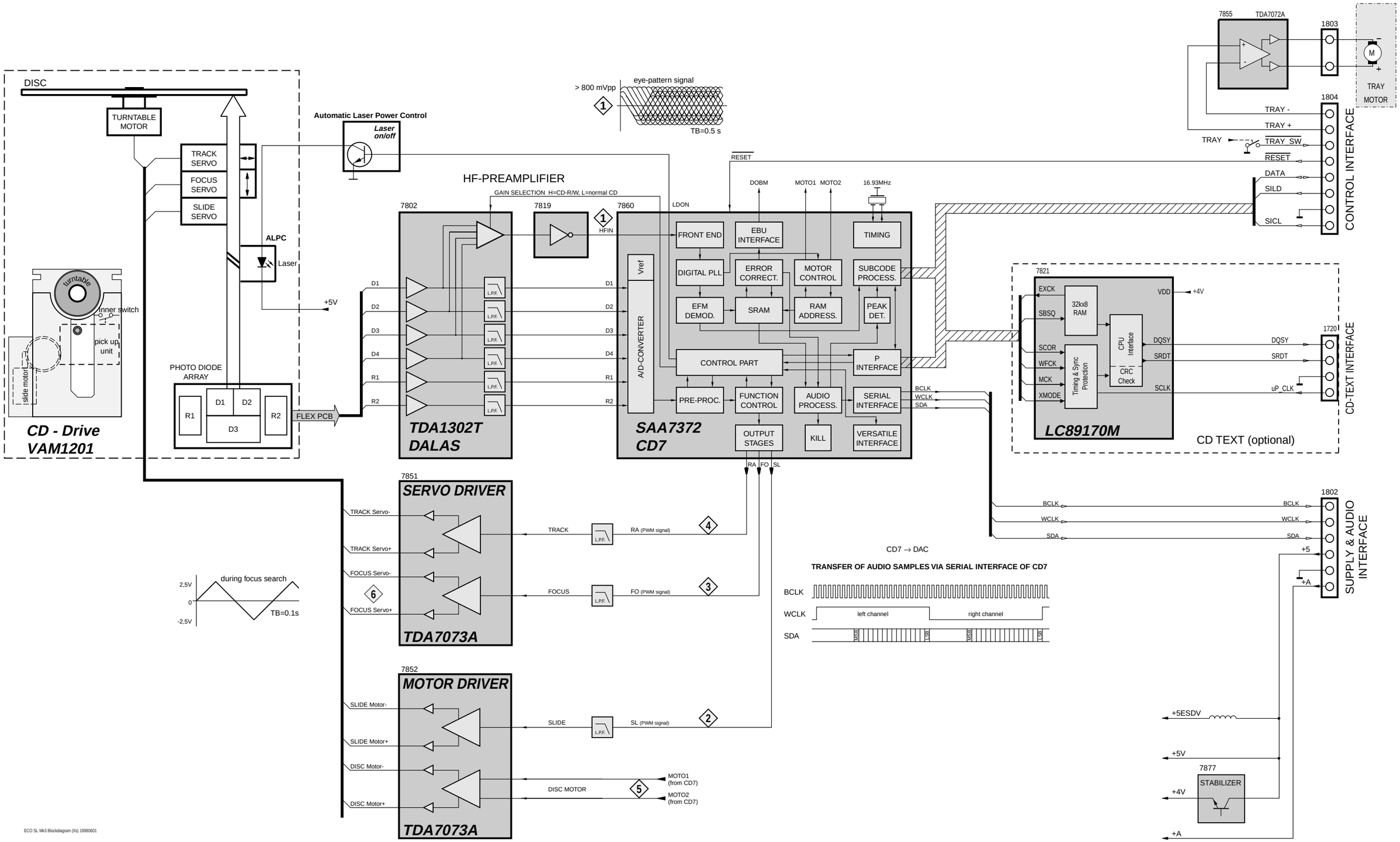
BLOCKDIAGRAM



CD753 Blockdiagram 19980604

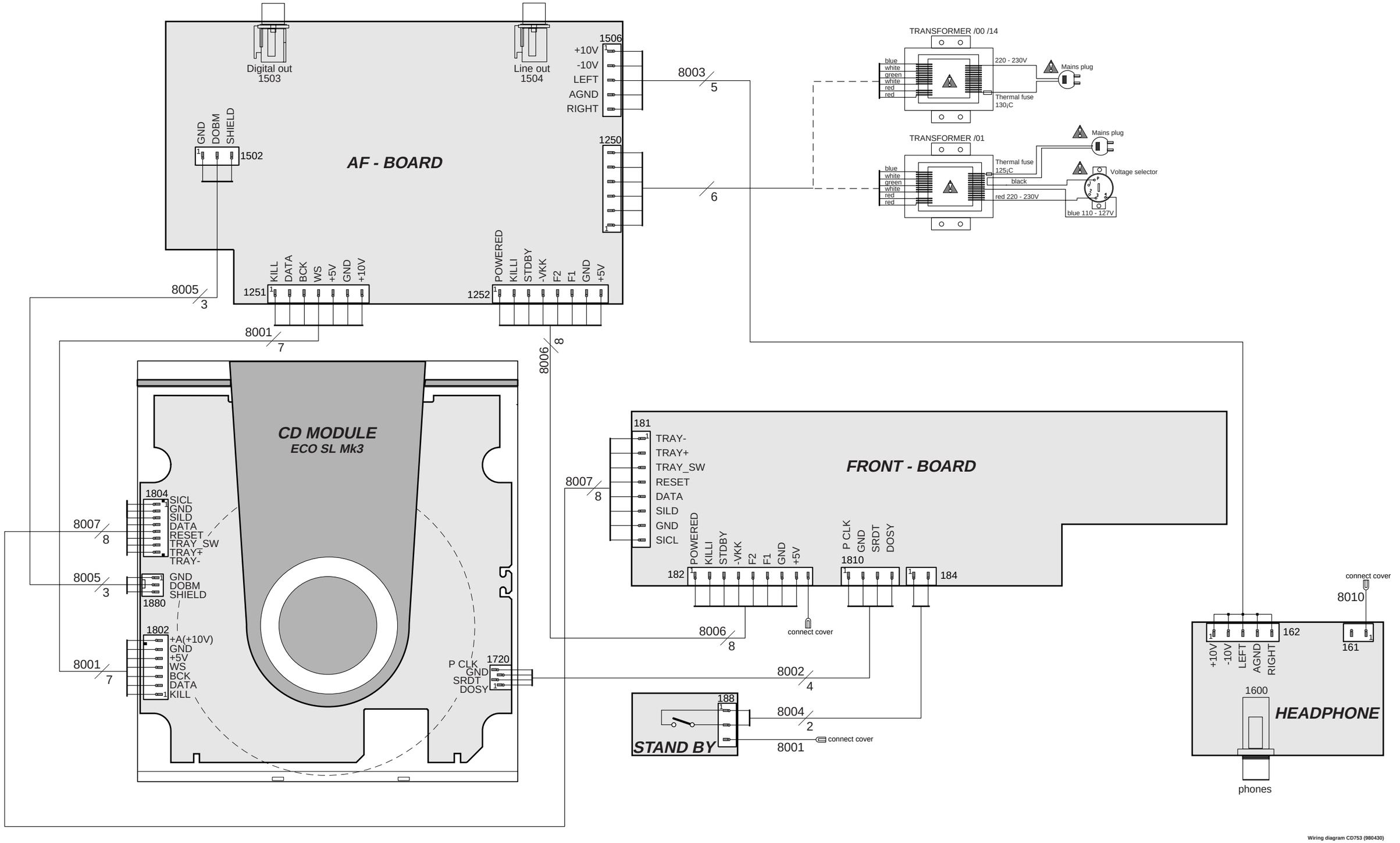
5-5

BLOCKDIAGRAM ECO SHORTLOADER Mk3



6-1

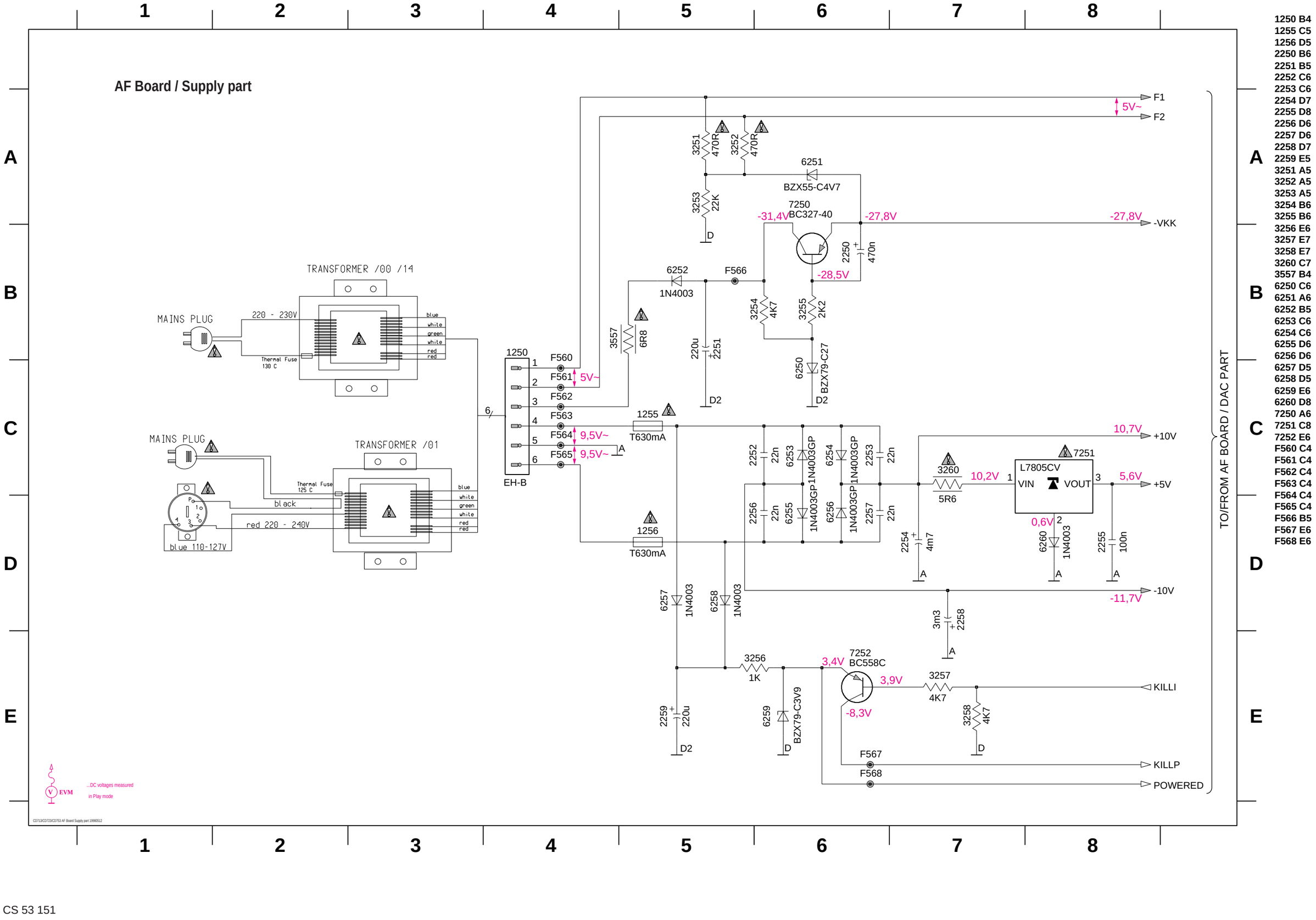
WIRING DIAGRAM



Wiring diagram CD753 (980430)

7-1

AF Board / Supply part



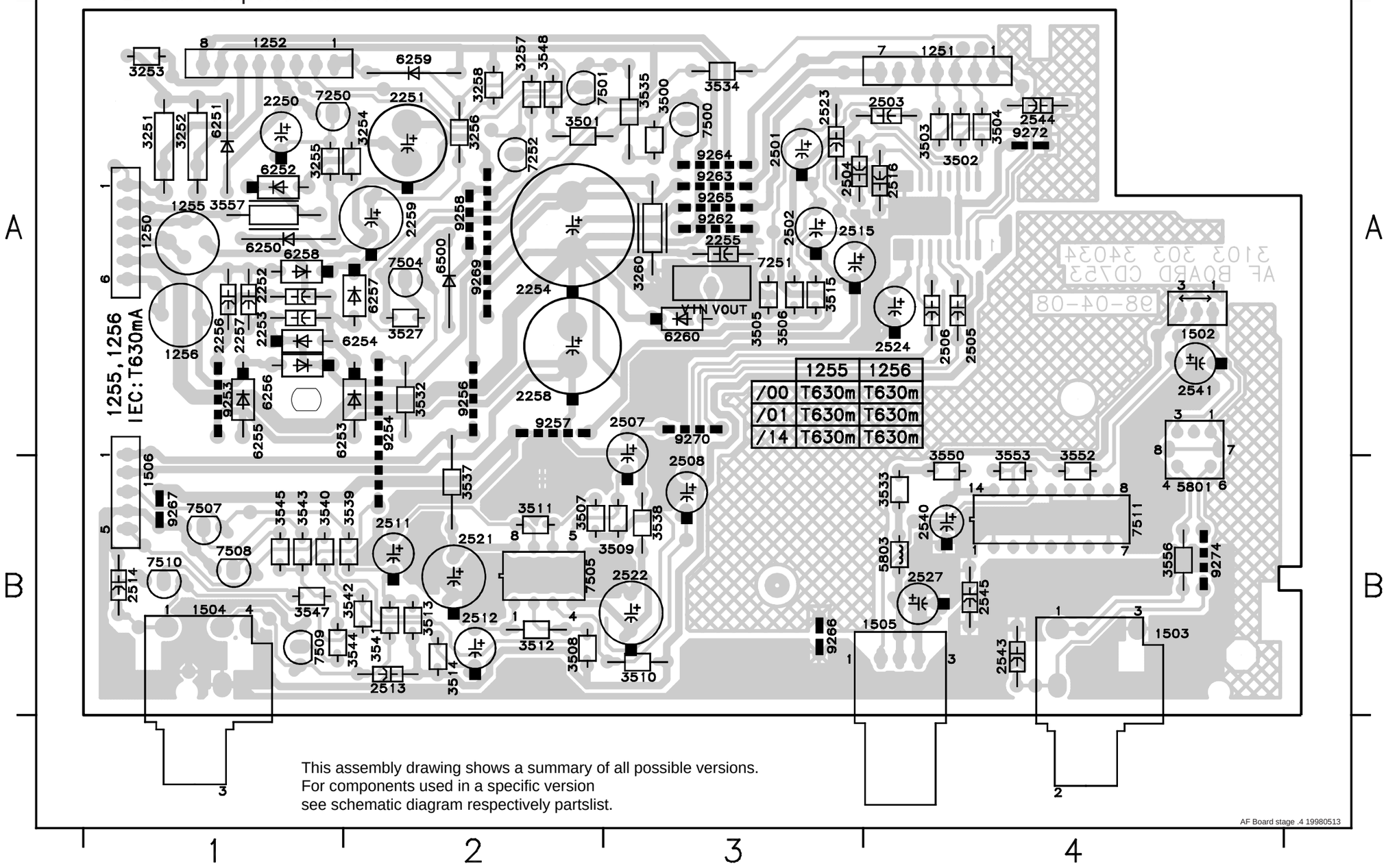
1250 B4
1255 C5
1256 D5
2250 B6
2251 B5
2252 C6
2253 C6
2254 D7
2255 D8
2256 D6
2257 D6
2258 D7
2259 E5
3251 A5
3252 A5
3253 A5
3254 B6
3255 B6
3256 E6
3257 E7
3258 E7
3260 C7
3557 B4
6250 C6
6251 A6
6252 B5
6253 C6
6254 C6
6255 D6
6256 D6
6257 D5
6258 D5
6259 E6
6260 D8
7250 A6
7251 C8
7252 E6
F560 C4
F561 C4
F562 C4
F563 C4
F564 C4
F565 C4
F566 B5
F567 E6
F568 E6

7-2

1250	A1	1506	B1	2258	A2	2508	B3	2523	A3	3252	A1	3501	A2	3510	B3	3534	A3
1251	A4	2250	A1	2259	A2	2511	B2	2524	A4	3253	A1	3502	A4	3511	B2	3535	A3
1252	A1	2251	A2	2501	A3	2512	B2	2527	B4	3254	A2	3503	A4	3512	B2	3537	B2
1255	A1	2252	A1	2502	A3	2513	B2	2540	B4	3255	A1	3504	A4	3513	B2	3538	B3
1256	A1	2253	A1	2503	A4	2514	B1	2541	A4	3256	A2	3505	A3	3514	B2	3539	B2
1502	A4	2254	A2	2504	A3	2515	A3	2543	B4	3257	A2	3506	A3	3515	A3	3540	B1
1503	B4	2255	A3	2505	A4	2516	A4	2544	A4	3258	A2	3507	B2	3527	A2	3541	B2
1504	B1	2256	A1	2506	A4	2521	B2	2545	B4	3260	A3	3508	B2	3532	A2	3542	B2
1505	B4	2257	A1	2507	A3	2522	B3	3251	A1	3500	A3	3509	B3	3533	B4	3543	B1

3544	B2	5801	B4	6257	A2	7501	A2	9254	A2	9267	B1						
3545	B1	5803	B4	6258	A1	7504	A2	9256	A2	9269	A2						
3547	B1	6250	A1	6259	A2	7505	B2	9257	A2	9270	A3						
3548	A2	6251	A1	6260	A3	7507	B1	9258	A2	9272	A4						
3550	A4	6252	A1	6500	A2	7508	B1	9262	A3	9274	B4						
3552	A4	6253	A1	7250	A1	7509	B1	9263	A3								
3553	A4	6254	A2	7251	A3	7510	B1	9264	A3								
3556	B4	6255	A1	7252	A2	7511	B4	9265	A3								
3557	A1	6256	A1	7500	A3	9253	A1	9266	B3								

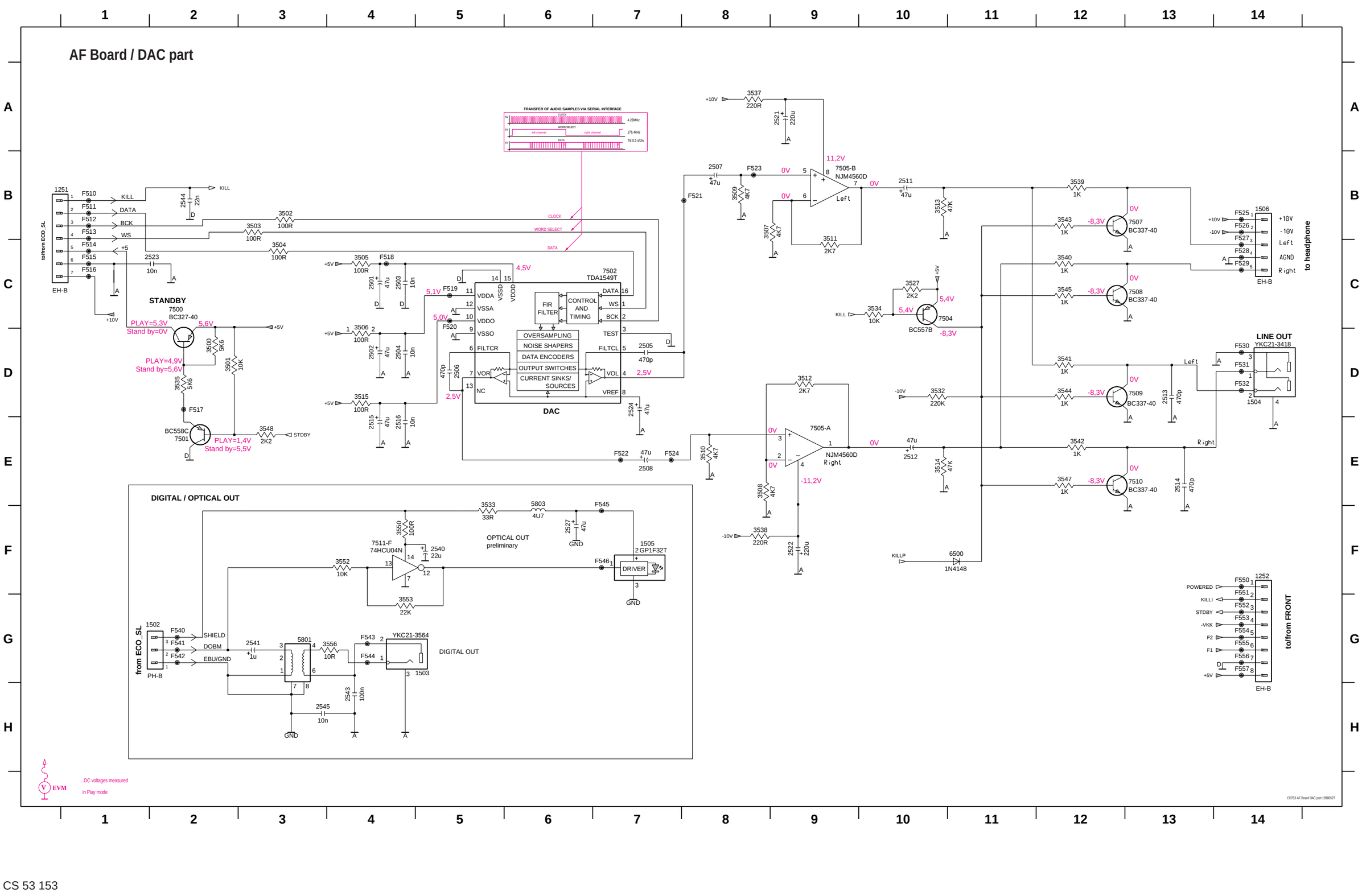
AF Board Componentside view



This assembly drawing shows a summary of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

7-3

1251 B1	1505 F7	2504 D4	2511 B10	2516 E4	2527 F6	2545 H3	3504 C3	3509 B8	3514 E10	3534 C10	3540 C12	3545 C12	3553 G4	7500 C2	7505-B B9	7511-F F4	F514 C1	F519 C5	F524 E7	F529 C14	F541 G2	F546 F7	F554 G14
1252 F14	1506 B14	2505 D7	2512 E10	2521 A9	2540 F2	3500 D2	3505 C4	3510 E8	3515 D4	3535 D2	3541 D12	3547 E12	3556 G4	7501 E2	7507 B13	7510 B1	F515 C1	F520 D5	F525 B14	F530 D14	F542 G2	F550 F14	F555 G14
1502 G2	2501 C4	2506 D5	2513 D13	2522 F9	2541 G3	3501 D2	3506 D4	3511 C9	3527 C10	3537 A8	3542 E12	3548 E3	5801 G3	7502 C7	7508 C13	7511 B1	F516 C1	F521 B8	F526 B14	F531 D14	F543 G2	F551 G14	F556 G14
1503 G4	2502 D4	2507 B8	2514 E13	2523 C2	2543 H4	3502 B3	3507 B8	3512 D9	3532 D10	3538 F8	3543 B12	3550 F4	5803 F6	7504 C10	7509 D13	F512 B1	F517 D2	F522 E7	F527 C14	F532 D14	F544 G4	F552 G14	F557 G14
1504 D14	2503 C4	2508 E7	2515 E4	2524 D7	2544 B2	3503 B3	3508 E8	3513 B10	3533 F5	3539 B12	3544 D12	3552 F4	6500 F11	7505-A E9	7510 E13	F513 B1	F518 C4	F523 B8	F528 C14	F540 G2	F545 F7	F553 G14	

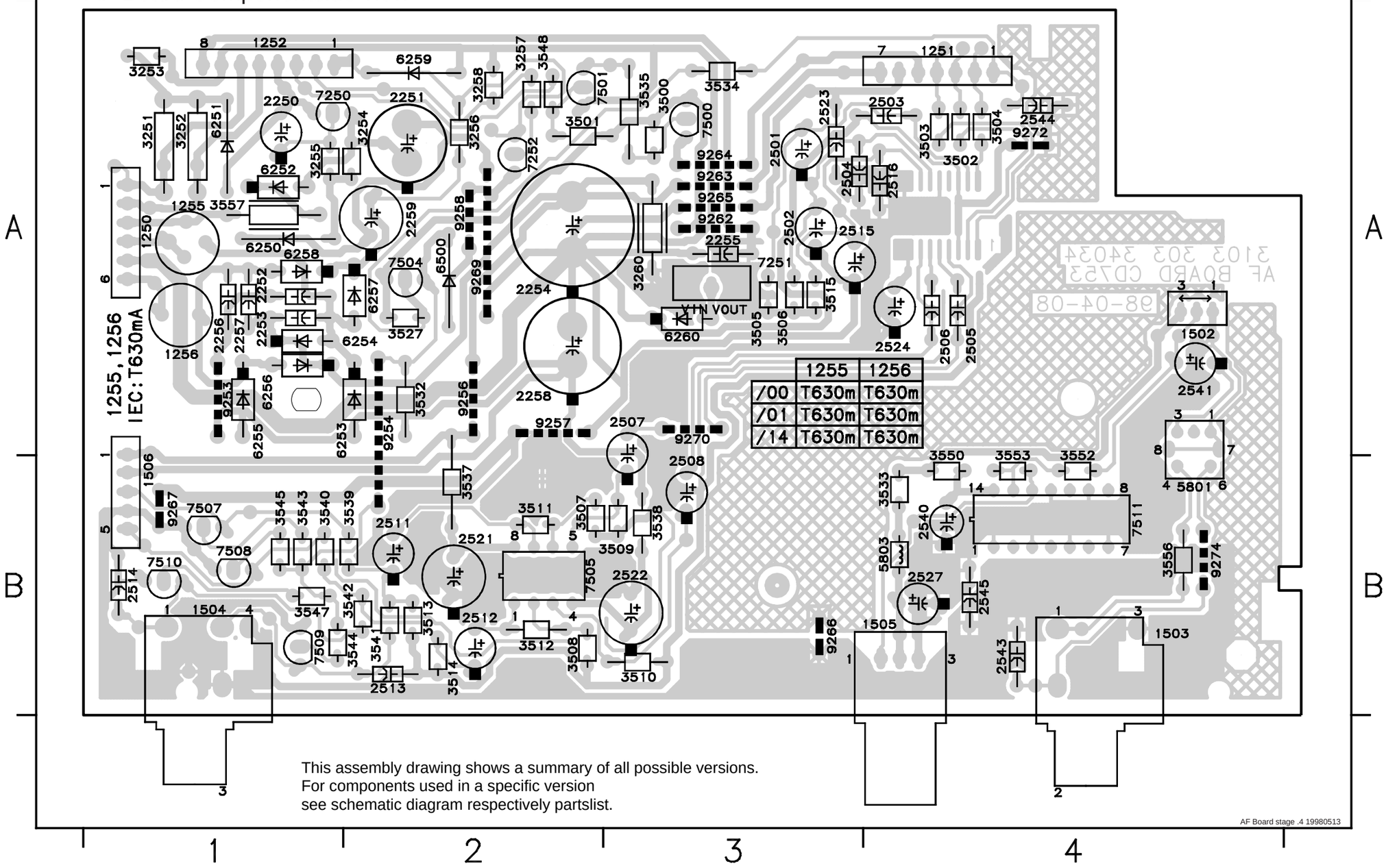


7-4

1250	A1	1506	B1	2258	A2	2508	B3	2523	A3	3252	A1	3501	A2	3510	B3	3534	A3
1251	A4	2250	A1	2259	A2	2511	B2	2524	A4	3253	A1	3502	A4	3511	B2	3535	A3
1252	A1	2251	A2	2501	A3	2512	B2	2527	B4	3254	A2	3503	A4	3512	B2	3537	B2
1255	A1	2252	A1	2502	A3	2513	B2	2540	B4	3255	A1	3504	A4	3513	B2	3538	B3
1256	A1	2253	A1	2503	A4	2514	B1	2541	A4	3256	A2	3505	A3	3514	B2	3539	B2
1502	A4	2254	A2	2504	A3	2515	A3	2543	B4	3257	A2	3506	A3	3515	A3	3540	B1
1503	B4	2255	A3	2505	A4	2516	A4	2544	A4	3258	A2	3507	B2	3527	A2	3541	B2
1504	B1	2256	A1	2506	A4	2521	B2	2545	B4	3260	A3	3508	B2	3532	A2	3542	B2
1505	B4	2257	A1	2507	A3	2522	B3	3251	A1	3500	A3	3509	B3	3533	B4	3543	B1

3544	B2	5801	B4	6257	A2	7501	A2	9254	A2	9267	B1						
3545	B1	5803	B4	6258	A1	7504	A2	9256	A2	9269	A2						
3547	B1	6250	A1	6259	A2	7505	B2	9257	A2	9270	A3						
3548	A2	6251	A1	6260	A3	7507	B1	9258	A2	9272	A4						
3550	A4	6252	A1	6500	A2	7508	B1	9262	A3	9274	B4						
3552	A4	6253	A1	7250	A1	7509	B1	9263	A3								
3553	A4	6254	A2	7251	A3	7510	B1	9264	A3								
3556	B4	6255	A1	7252	A2	7511	B4	9265	A3								
3557	A1	6256	A1	7500	A3	9253	A1	9266	B3								

AF Board Componentside view



This assembly drawing shows a summary of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

AF Board stage .4 19980513

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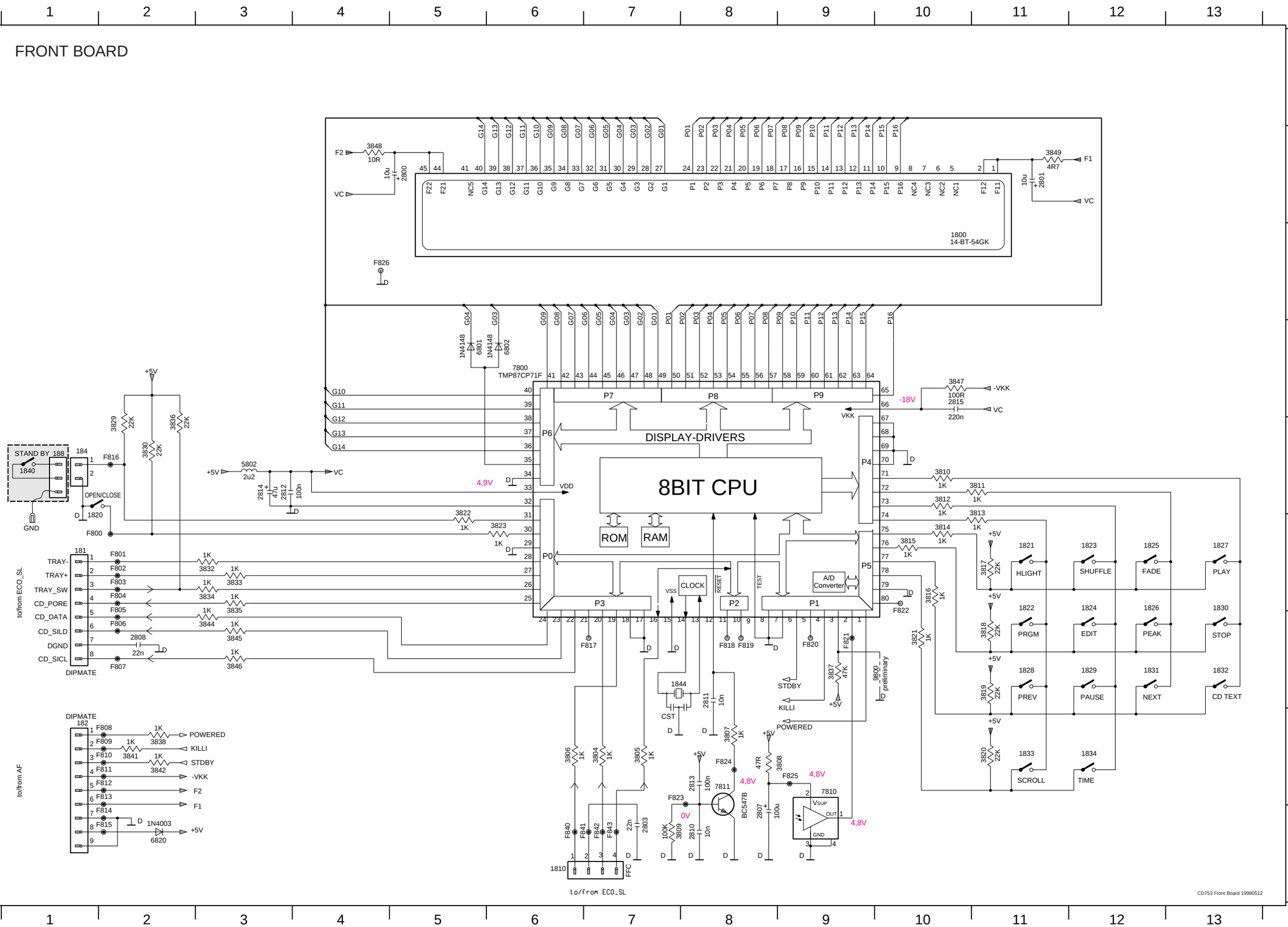
FRONT BOARD



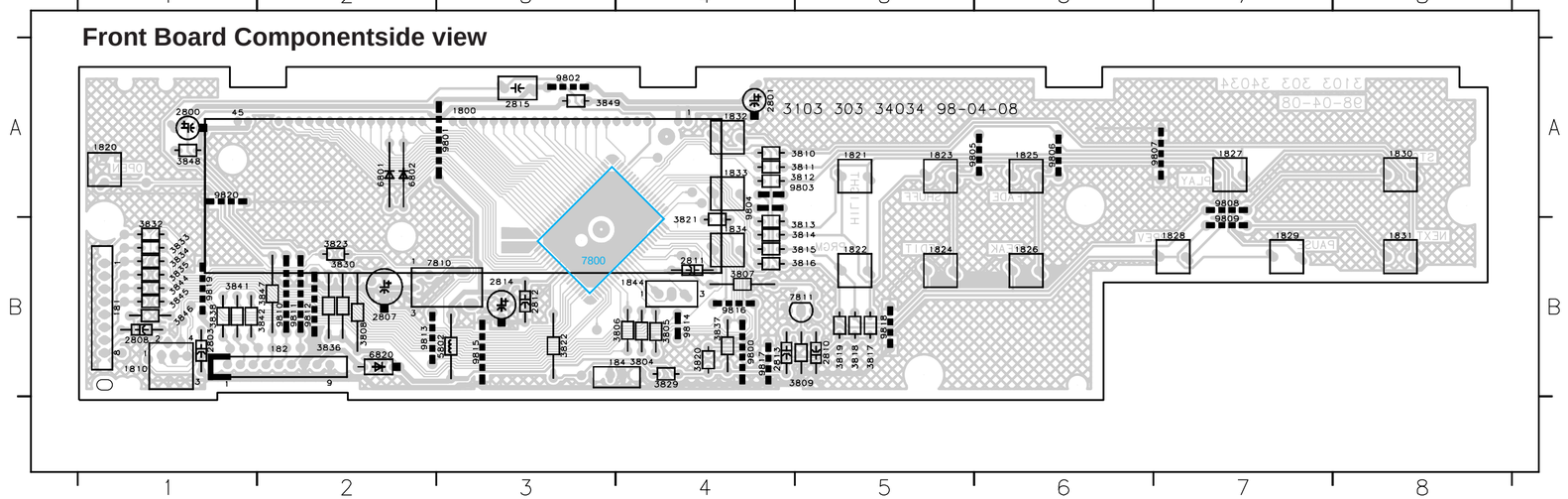
181 F1
182 H1
184 E1
1800 C10
1810 I6
1820 F1
1821 F11
1822 F11
1823 F12
1824 F12
1825 F12
1826 F12
1827 F13
1828 G11
1829 G12
1830 F13
1831 G12
1832 G13
1833 H11
1834 H12
1844 G7
2800 B5
2801 B11
2803 I7
2807 I8
2808 G2
2810 I8
2811 G8
2812 E3
2813 H8
2814 E3
2815 D10
3804 H7
3805 H7
3806 H6
3807 H8
3808 H8
3809 I7
3810 E10
3811 E11
3812 E10
3813 F11
3814 F10
3815 F10
3816 F10
3817 F11
3818 G11
3819 G11
3820 H11
3821 G10
3822 E5
3823 F6
3829 E2
3830 E2
3832 F3
3833 F3
3834 F3
3835 F3
3836 E2
3837 G9
3838 H2
3841 H2
3842 H2
3844 G3
3845 G3
3846 G3
3847 D10
3848 B4
3849 B11
5802 E3
6801 D5
6802 D6
6820 I2
7800 D6
7810 H9
7811 H8
9800 G10

7-6

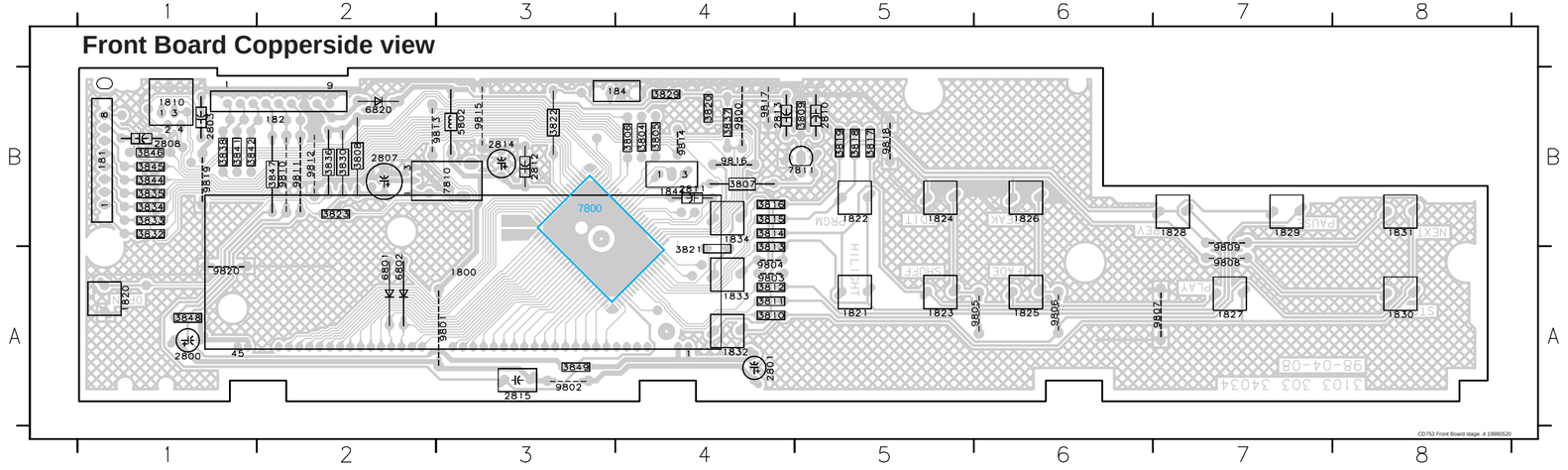
7-6

181 B1	1821 A5	1827 A7	1833 A4	2807 B2	2814 B3	3808 B2	3814 B5	3820 B4	3832 B1	3838 B1	3847 B2	6820 B2	9803 A5	9809 A7	9815 B3
182 B2	1822 B5	1828 B7	1834 B4	2808 B1	2815 A3	3809 B5	3815 B5	3821 A4	3833 B1	3841 B1	3848 A1	7810 B3	9804 A4	9810 B2	9816 B4
184 B3	1823 A5	1829 B7	1844 B4	2810 B5	3804 B4	3810 A5	3816 B5	3822 B3	3834 B1	3842 B2	3849 A3	7811 B5	9805 A5	9811 B2	9817 B4
1800 A3	1824 B5	1830 A8	2800 A1	2811 B4	3805 B4	3811 A5	3817 B5	3823 B2	3835 B1	3844 B1	5802 B3	9800 B4	9806 A6	9812 B2	9818 B5
1810 B1	1825 A6	1831 B8	2801 A4	2812 B3	3806 B3	3812 A5	3818 B5	3829 B4	3836 B2	3845 B1	6801 A2	9801 A3	9807 A6	9813 B2	9819 B1
1820 A1	1826 B6	1832 A4	2803 B1	2813 B4	3807 B4	3813 B5	3819 B5	3830 B2	3837 B4	3846 B1	6802 A2	9802 A3	9808 A7	9814 B4	9820 A1
															7800 B3

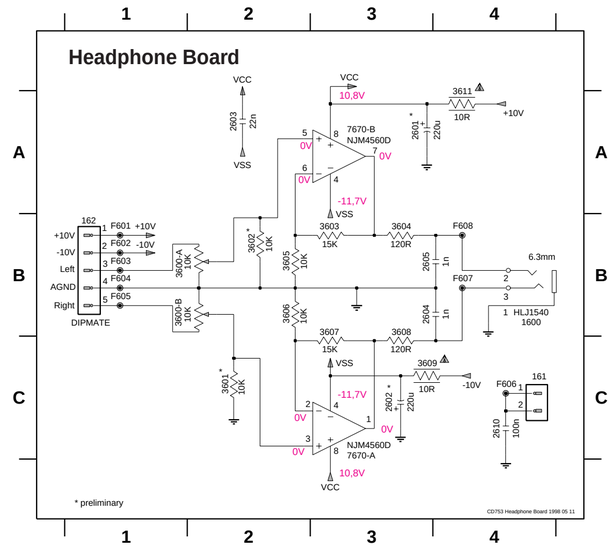
Front Board Componentside view



Front Board Copperside view

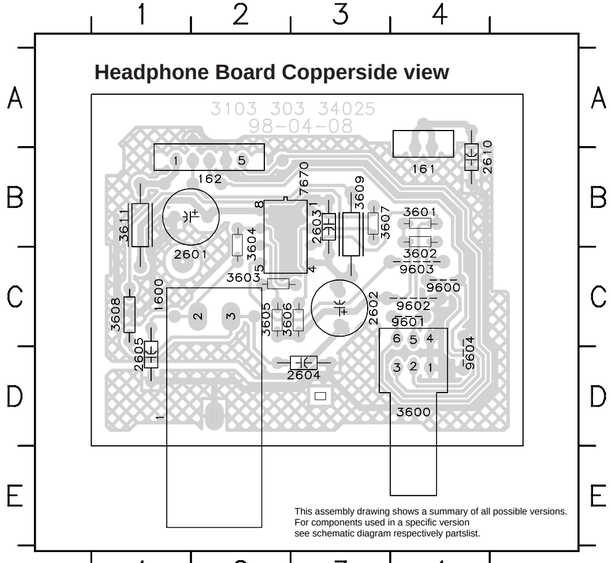


Headphone Board



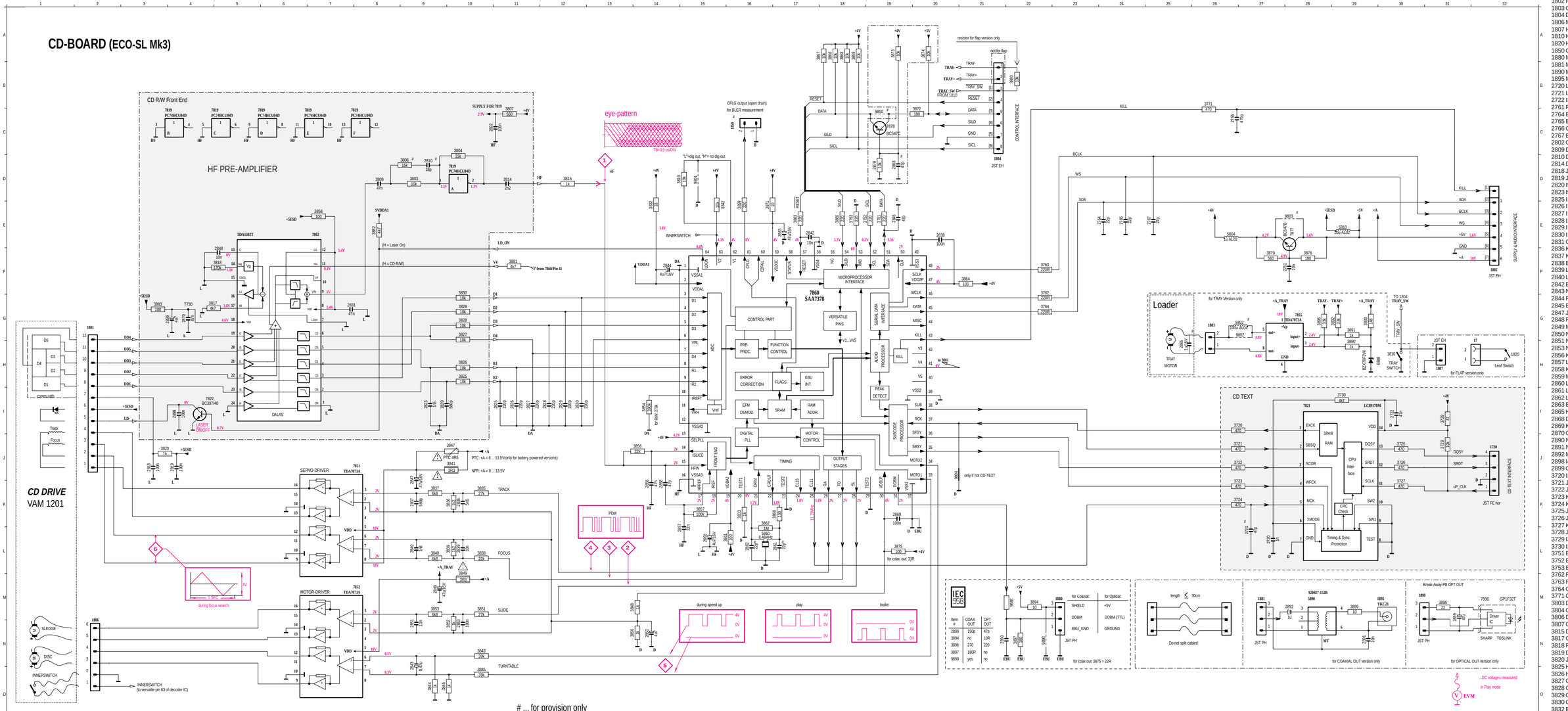
161	C4
162	B1
1600	B4
2601	A3
2602	C3
2603	A2
2604	B3
2605	B3
2610	C4
3600-A	B1
3600-B	B1
3601	C2
3602	B2
3603	B3
3604	B3
3605	B2
3606	B2
3607	B3
3611	A4
3608	B3
3609	C3
7670-A	C3
7670-B	A3

Headphone Board Copperside view


3103 303 34025
98-04-08
This assembly drawing shows a summary of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

161	B4
162	B2
1600	D2
2601	B2
2602	C3
2603	B3
2604	D3
2605	D1
2610	B4
3600	D4
3601	B4
3602	B4
3603	C2
3604	B2
3605	D2
3606	D3
3607	B3
3608	C1
3609	B3
3611	B1
7670	B3
9600	C4
9601	C4
9602	C4
9603	C4
9604	D4

CD-BOARD (ECO-SL Mk3)

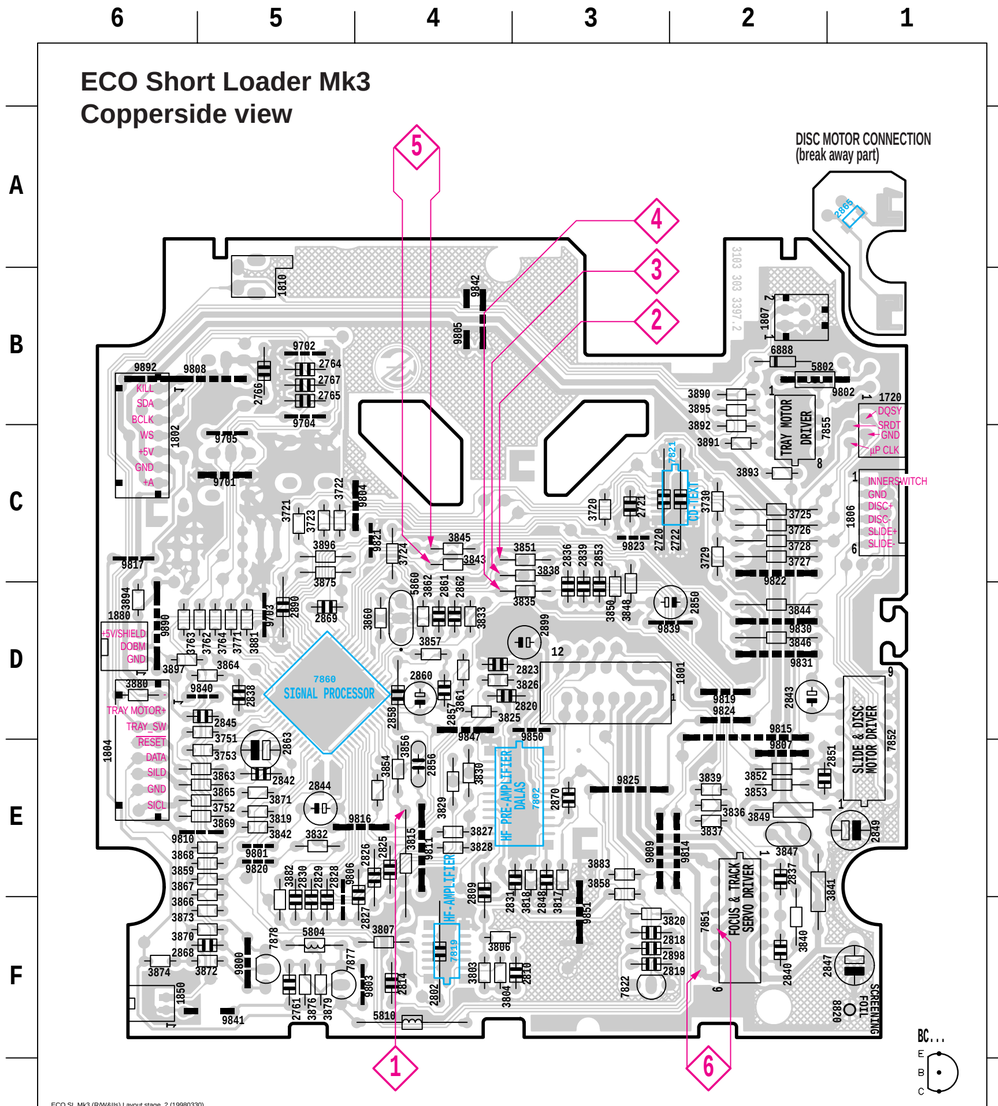


1720 J32
1801 G2
1802 F32
1803 G26
1804 D21
1806 M2
1807 H31
1810 H30
1820 H32
1850 C16
1880 M23
1881 M27
1890 M30
1895 M29
2720 L27
2721 L27
2722 I30
2761 F28
2764 E24
2765 E24
2766 C26
2767 E25
2802 C10
2809 D8
2810 D9
2814 D11
2818 J3
2819 J4
2820 I9
2823 I9
2825 I11
2826 I11
2827 I11
2828 I12
2829 I12
2830 I12
2831 G7
2836 K10
2837 K9
2838 E20
2839 L10
2840 L9
2842 E17
2843 N9
2844 F14
2845 E19
2847 J39
2848 F5
2849 M9
2850 N14
2851 N9
2853 N10
2856 K14
2857 L15
2858 K14
2859 M31
2860 L15
2861 L17
2862 L16
2863 E17
2865 H26
2868 D19
2869 K19
2870 G4
2890 N21
2891 N29
2892 M28
2898 I4
2899 G4
3720 I27
3721 J27
3722 J27
3723 K27
3724 K27
3725 J30
3726 J30
3727 K30
3728 J31
3729 I31
3730 I29
3751 E19
3752 E19
3753 E18
3762 F22
3763 F22
3764 G22
3771 C26
3803 D9
3804 C10
3806 D9
3807 C11
3815 D12
3817 G4
3818 F5
3819 D15
3820 J3
3825 H10
3826 H10
3827 G10
3828 G10
3829 G10
3830 G10
3832 E14
3833 K16
3835 K10
3836 K10
3837 K9
3838 L10
3839 L10
3840 L9
3841 J10
3842 E15
3843 N10
3844 O9
3845 O10
3846 O9
3847 J10
3848 M14
3849 M10
3850 N14
3851 M10
3852 N10
3853 M9
3854 I14
3856 J14
3857 K15
3858 E7
3859 E16
3860 K17
3861 L16
3862 K16
3863 E17
3864 F21
3865 E18
3866 A18
3867 A18
3868 A18
3869 A18
3870 D19
3871 E16
3872 C20
3873 A19
3874 A20
3875 L19
3876 F28
3879 F27
3880 B22
3881 F11
3882 E8
3883 G3
3890 H29
3891 G29
3892 G29
3893 G29
3894 M22
3895 G28
3896 M22
3897 N22
3898 M31
3899 M29
5802 G27
5804 E26
5810 E29
5860 L16
5890 M28
6888 H30
7802 E7
7819 C3
7819 C4
7819 C5
7819 C6
7819 C7
7819 D10
7821 I28
7822 I5
7851 J8
7852 M8
7855 G28
7860 F15
7877 E28
7878 C19
7896 M32
9800 C19
9801 D15
9802 G27
9803 E28
9804 J20
9890 N22

7-8

7-8

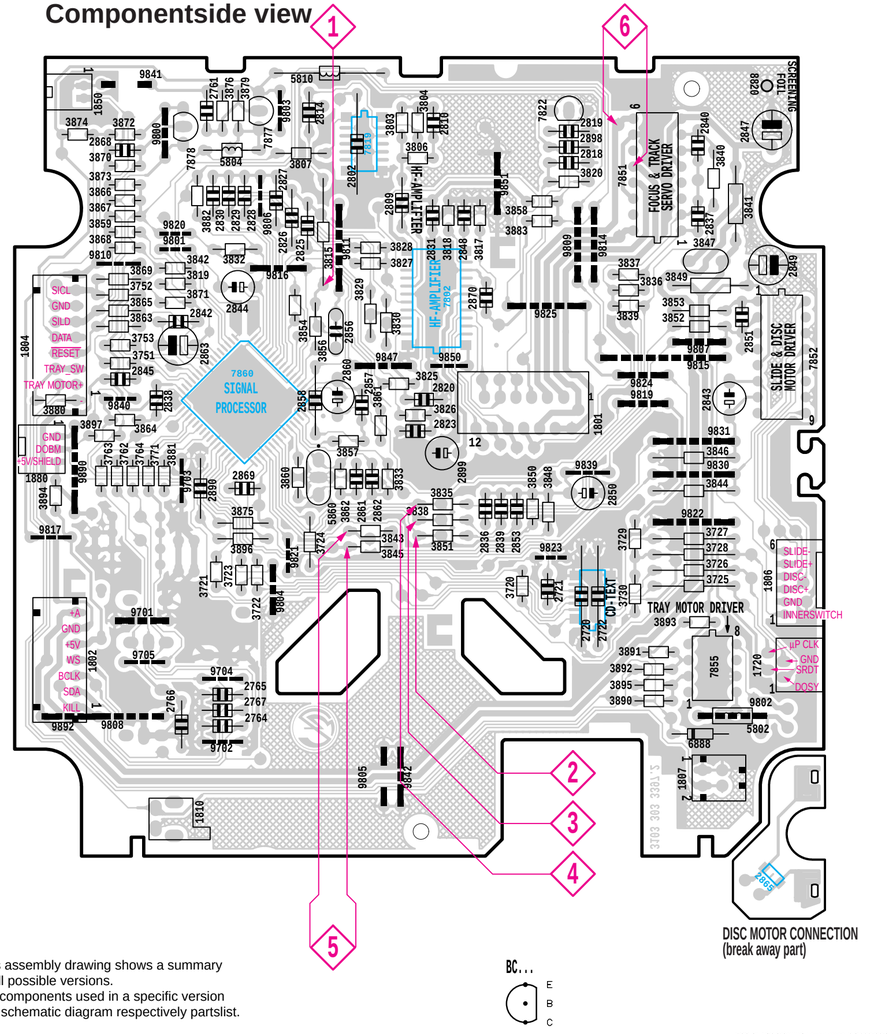
ECO Short Loader Mk3
Copperside view



ECO SL Mk3 (R/W&IIs) Layout stage .2 (19980330)

17 opt.	3844 D2	
1720 C1	3845 C4	
1801 D3	3846 D2	
1802 C6	3847 E2	
1804 E6	3848 D3	
1806 C1	3849 E2	
1807 B2	3850 D3	
1810 B5	3851 C3	
1820 B3	3852 E2	
1850 F6	3853 E2	
1880 D6	3854 E4	
1881 opt.	3856 E4	
1890 opt.	3857 D4	
1895 opt.	3858 E3	
2720 C3	3859 E5	
2721 C3	3860 D4	
2722 C2	3861 D4	
2761 F5	3862 D4	
2764 B5	3863 E5	
2765 B5	3864 D5	
2766 B5	3865 E5	
2767 B5	3866 E5	
2802 F4	3867 E5	
2809 E4	3868 E5	
2810 F3	3869 E5	
2814 F4	3870 F5	
2818 F3	3871 E5	
2819 F3	3872 F5	
2820 D4	3873 F5	
2823 D4	3874 F6	
2825 E4	3875 C5	
2826 E4	3876 F5	
2827 E4	3879 F5	
2828 F5	3880 D6	
2829 F5	3881 D5	
2830 F5	3882 F5	
2831 E3	3883 E3	
2836 D3	3890 B2	
2837 E2	3891 C2	
2838 D5	3892 C2	
2839 D3	3893 C2	
2840 F2	3894 D6	
2842 E5	3895 B2	
2843 D2	3896 C5	
2844 E5	3897 D6	
2845 D5	3898 opt.	
2847 F1	3899 opt.	
2848 E3	5802 B2	
2849 E1	5804 F5	
2850 D2	5810 F4	
2851 E2	5860 D4	
2853 D3	5890 opt.	
2856 E4	6888 B2	
2857 D4	7802 E4	
2858 D4	7819 F4	
2859 opt.	7822 F3	
2860 D4	7851 F2	
2861 D4	7852 D1	
2862 D4	7855 C2	
2863 E5	7860 D5	
2865 A1	7877 F5	
2868 E5	7878 F5	
2869 D5	7896 opt.	
2870 E3	9701 C5	
2890 D5	9702 B5	
2891 opt.	9703 D5	
2892 opt.	9704 B5	
2898 F3	9705 C5	
2899 D3	9800 F5	
3720 C3	9801 E5	
3721 C5	9802 B2	
3722 C5	9803 F4	
3723 C5	9804 C4	
3724 C4	9805 B4	
3725 C2	9806 F5	
3726 C2	9807 E2	
3727 C2	9808 B5	
3728 C2	9809 E3	
3729 C2	9810 E5	
3730 C2	9811 E4	
3751 D5	9814 E2	
3752 E5	9815 D2	
3753 E5	9816 E4	
3762 E5	9817 C6	
3763 D6	9819 D2	
3764 D5	9820 E5	
3771 D5	9821 C4	
3803 F4	9822 C2	
3804 F4	9823 C3	
3806 F4	9824 D2	
3807 F4	9825 E3	
3815 E4	9830 D2	
3817 E3	9831 D2	
3818 E3	9839 D2	
3819 E5	9840 D5	
3820 F3	9841 F5	
3825 D4	9842 B4	
3826 D4	9847 D4	
3827 E4	9850 D3	
3828 E4	9851 F3	
3829 E4	9890 D6	
3830 E4	9892 B6	
3832 E5		
3833 D4		
3835 D3		
3836 E2		
3837 E2		
3838 C3		
3839 E2		
3840 F2		
3841 E2		
3842 E5		
3843 C4		

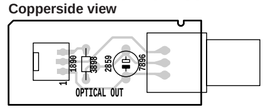
Componentside view



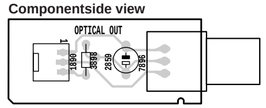
This assembly drawing shows a summary
of all possible versions.
For components used in a specific version
see schematic diagram respectively partslist.

ECO SL Mk3 (R/W&IIs) Layout stage .2 (19980330)

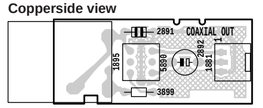
OPTIONAL
FOR SETS WITH OPTICAL OUT
Copperside view



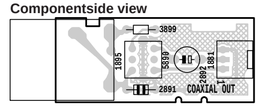
Componentside view



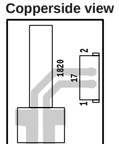
OPTIONAL
FOR SETS WITH COAXIAL OUT
Copperside view



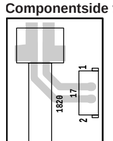
Componentside view



OPTIONAL
FOR FLAP LOADERS
Copperside view



Componentside view



WARNING

CHARGED CAPACITORS ON THE CD BOARD MAY DAMAGE THE CD-ELECTRONICS WHEN CONNECTING A NEW CD DRIVE. THAT´S WHY, BESIDES THE SAFETY MEASURES LIKE
• SWITCH OFF POWER SUPPLY
• ESD PROTECTION
ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the CDM mechanism:

1. Disconnect old CD drive flexfoil from printed board
2. Connect paperclip to CD drive flexfoil to short-circuit flexfoil (fig.1)
3. Short-circuit printed board with **brass-sheet (4822 321 11197)** plugged into the flexfoil connector (fig.2)
4. Remove old CD drive
5. Position new CD drive in its studs
6. Remove short-circuit from printed board connector
7. Remove short-circuit from flexfoil of new CD drive
8. Connect new flexfoil to print connector (fig.3)

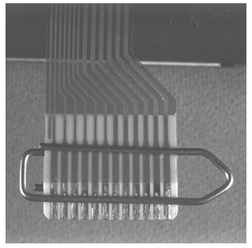


fig.1

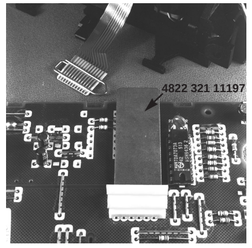


fig.2

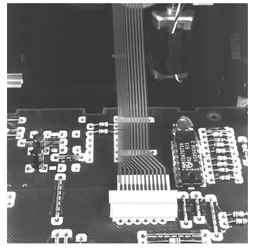
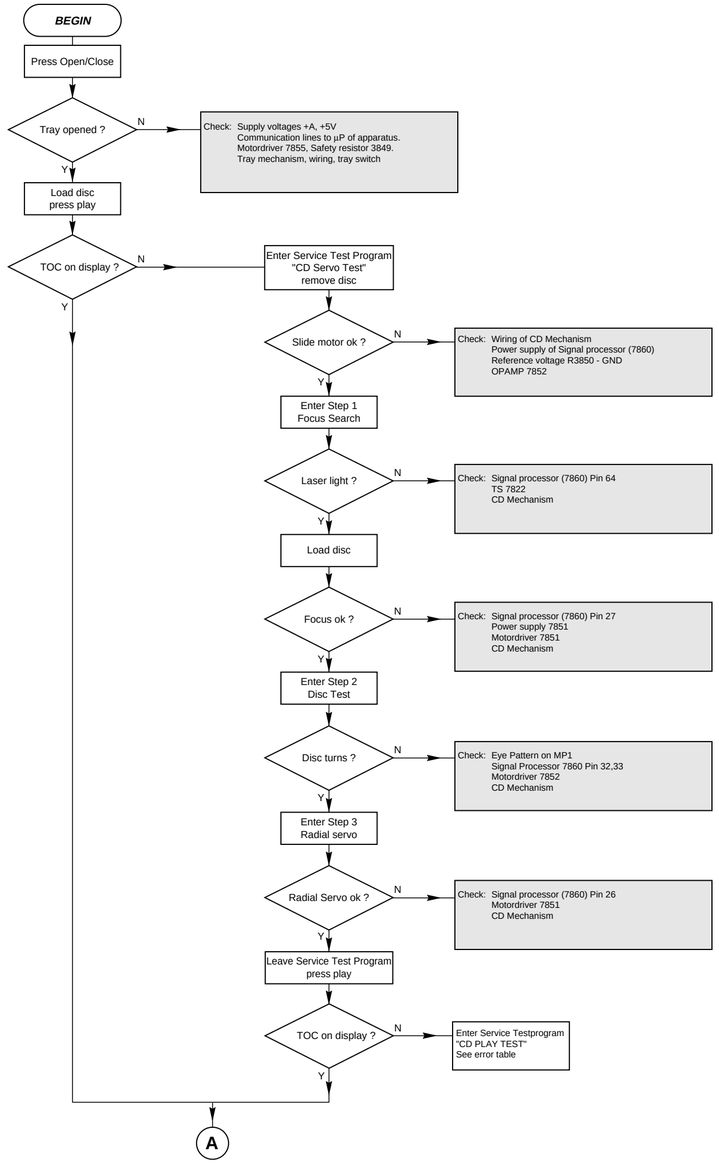
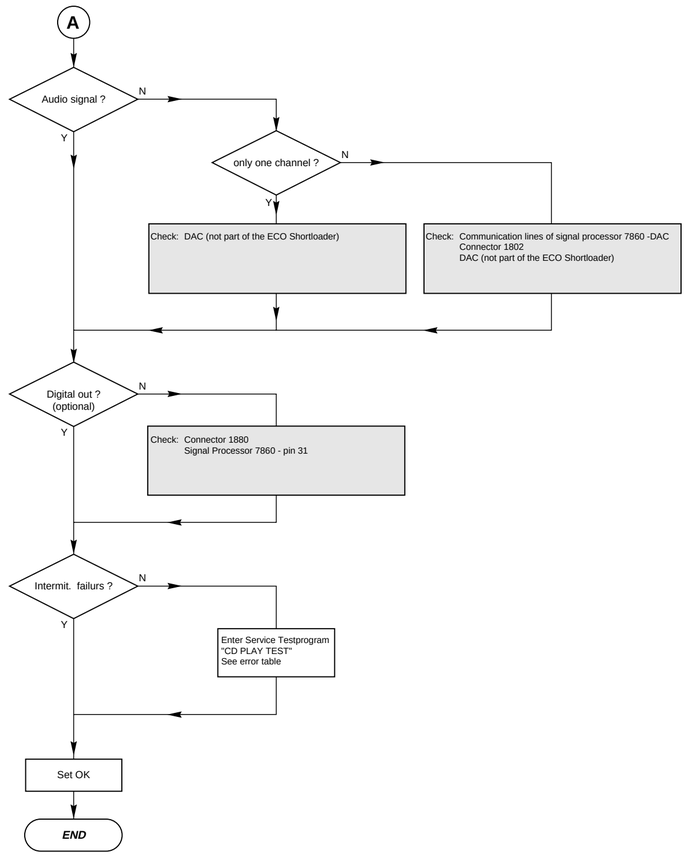


fig.3

Remarks

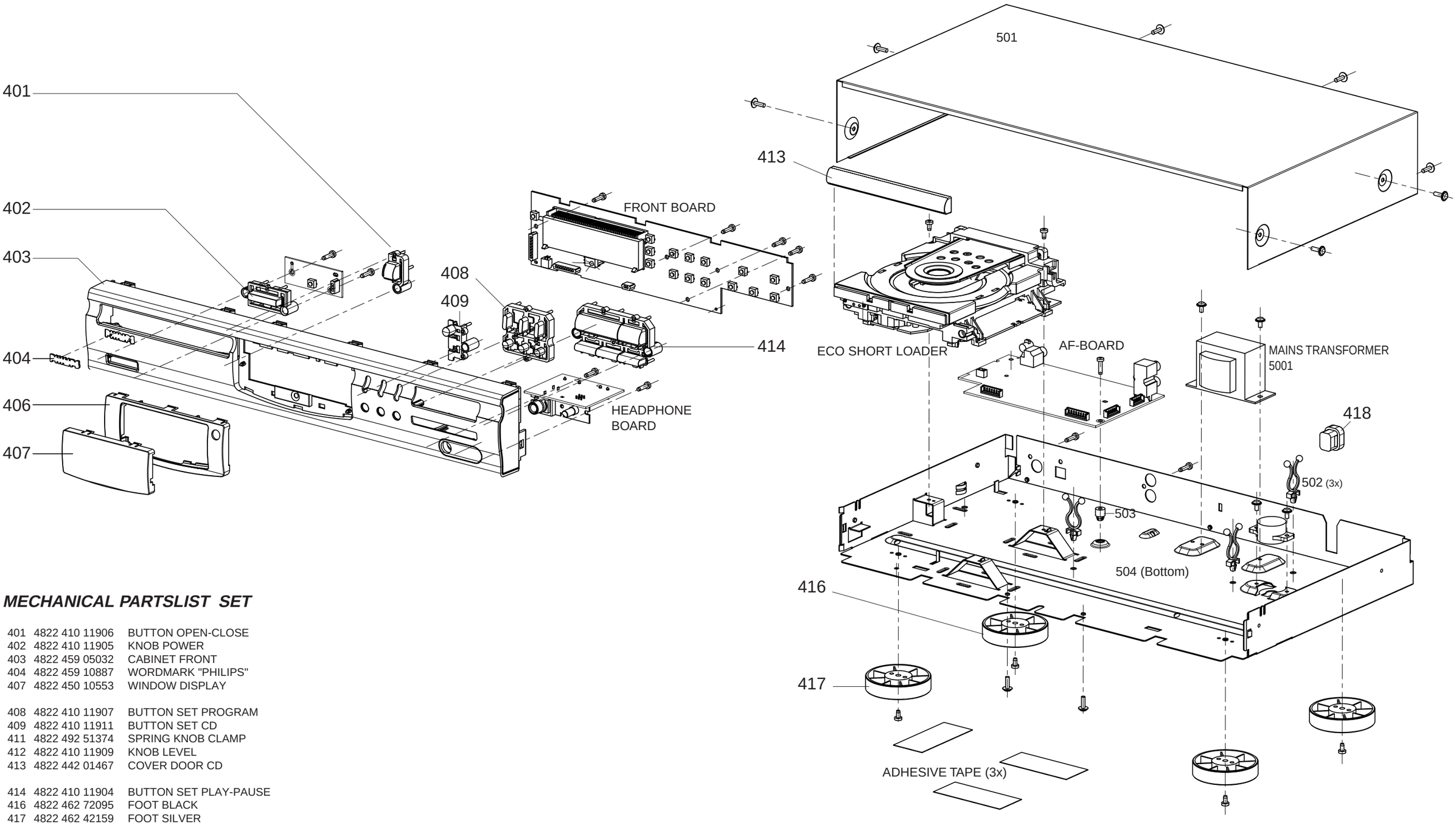




Faulfinding tree CDSL MK2(No). 060698

10-1

EXPLODED VIEW of SET



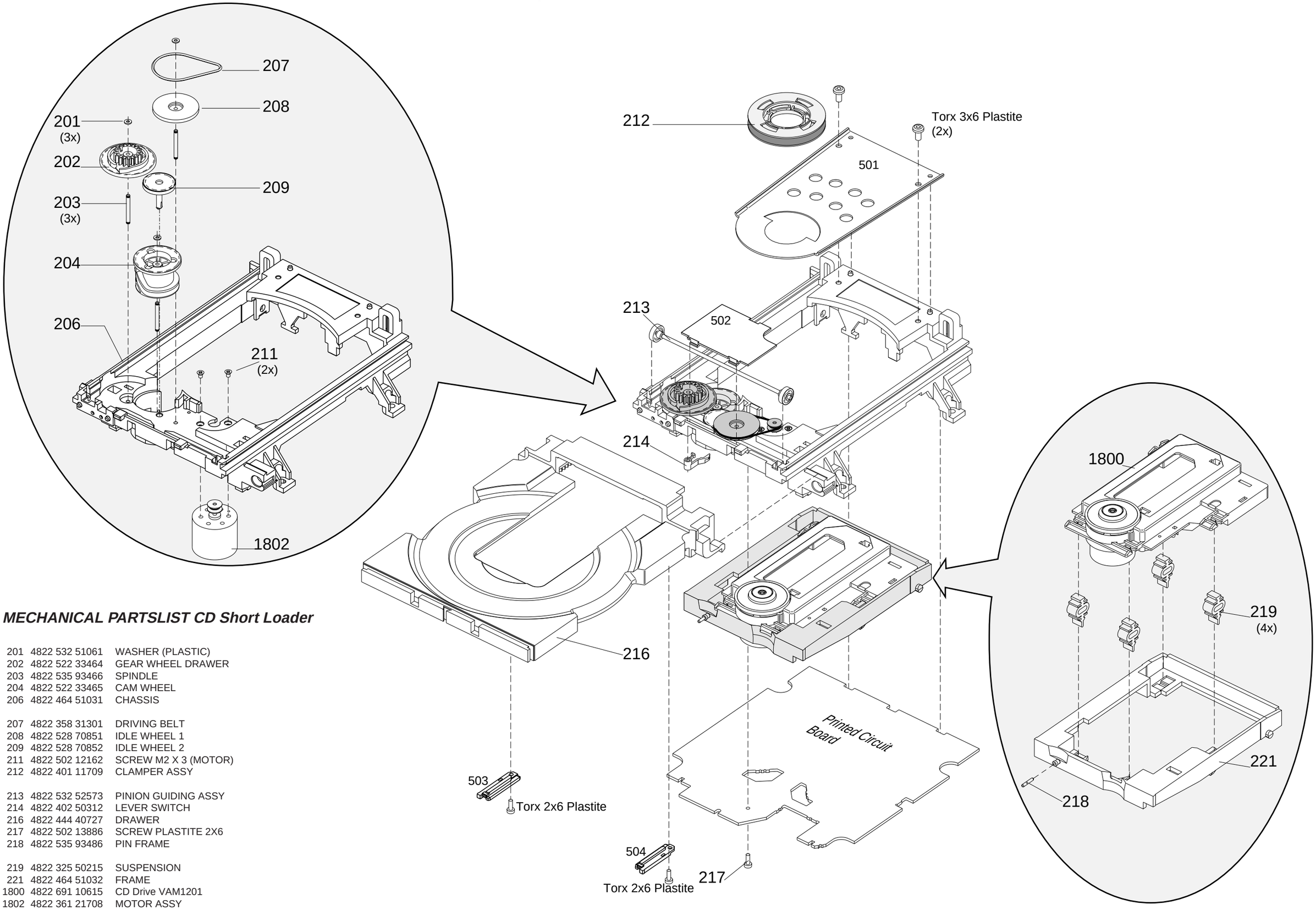
CD7x3 Exploded view (980430)

MECHANICAL PARTSLIST SET

401	4822 410 11906	BUTTON OPEN-CLOSE
402	4822 410 11905	KNOB POWER
403	4822 459 05032	CABINET FRONT
404	4822 459 10887	WORDMARK "PHILIPS"
407	4822 450 10553	WINDOW DISPLAY
408	4822 410 11907	BUTTON SET PROGRAM
409	4822 410 11911	BUTTON SET CD
411	4822 492 51374	SPRING KNOB CLAMP
412	4822 410 11909	KNOB LEVEL
413	4822 442 01467	COVER DOOR CD
414	4822 410 11904	BUTTON SET PLAY-PAUSE
416	4822 462 72095	FOOT BLACK
417	4822 462 42159	FOOT SILVER
418	4822 532 60948	CABLE BUSH
5001	4822 146 11031	TRANSFORMER MAINS not for /01
5001	4822 146 11032	TRANSFORMER MAINS for /01 only
	4822 219 10538	RC07105/01 (Remote Control)
	4822 321 22832	CINCH-CABLE

10-2

Exploded view CD Short Loader



MECHANICAL PARTSLIST CD Short Loader

201	4822 532 51061	WASHER (PLASTIC)
202	4822 522 33464	GEAR WHEEL DRAWER
203	4822 535 93466	SPINDLE
204	4822 522 33465	CAM WHEEL
206	4822 464 51031	CHASSIS
207	4822 358 31301	DRIVING BELT
208	4822 528 70851	IDLE WHEEL 1
209	4822 528 70852	IDLE WHEEL 2
211	4822 502 12162	SCREW M2 X 3 (MOTOR)
212	4822 401 11709	CLAMPER ASSY
213	4822 532 52573	PINION GUIDING ASSY
214	4822 402 50312	LEVER SWITCH
216	4822 444 40727	DRAWER
217	4822 502 13886	SCREW PLASTITE 2X6
218	4822 535 93486	PIN FRAME
219	4822 325 50215	SUSPENSION
221	4822 464 51032	FRAME
1800	4822 691 10615	CD Drive VAM1201
1802	4822 361 21708	MOTOR ASSY
	4822 502 30735	SCREW 3 X 6 PLASTITE

ELECTRICAL PARTSLIST CD BOARD

MISCELLANEOUS

1720	4822 265 11183	CON. FLEX FOIL 4 PIN SIDE ENTRY
1800	4822 691 10645	CD DRIVE VAM1201
1801	4822 267 51453	CON. FLEX FOIL 12 PIN SIDE ENTRY
1810	4822 276 13503	TRAY SWITCH
8002	4822 320 12385	FLEX FOIL 4P 100mm (CD Text)

CAPACITORS

2720	4822 122 33197	1nF	10%	50V
2722	4822 126 12785	47nF	10%	50V
2761	4822 121 51387	10nF	20%	16V
2764	4822 122 33191	22pF	5%	50V
2765	4822 122 33191	22pF	5%	50V
2766	4822 126 12878	1,5nF	10%	16V
2767	4822 122 33191	22pF	5%	50V
2802	4822 126 12882	100nF	20%	50V
2809	4822 126 12785	47nF	10%	50V
2814	4822 126 12339	2,2nF	10%	16V
2818	4822 126 12882	100nF	20%	50V
2819	4822 126 12882	100nF	20%	50V
2820	4822 122 10459	560pF	10%	50V
2823	4822 126 12878	1,5nF	10%	16V
2825	4822 122 10466	220pF	10%	50V
2826	4822 122 10466	220pF	10%	50V
2827	4822 122 10466	220pF	10%	50V
2828	4822 122 10466	220pF	10%	50V
2829	4822 122 10466	220pF	10%	50V
2830	4822 122 10466	220pF	10%	50V
2831	4822 126 12785	47nF	10%	50V
2836	4822 126 13098	5,6nF	20%	16V
2837	4822 122 10459	560pF	10%	50V
2838	4822 126 12882	100nF	20%	50V
2839	4822 121 51387	10nF	20%	16V
2840	4822 122 10576	1,8nF	10%	16V
2842	4822 121 51387	10nF	20%	16V
2843	5322 124 41948	0,47µF	20%	50V
2844	4822 124 22726	4,7µF	20%	35V
2845	4822 122 33848	47pF	5%	50V
2847	4822 124 40433	47µF	20%	25V
2848	4822 121 51387	10nF	20%	16V
2849	4822 124 40433	47µF	20%	25V
2850	4822 124 22726	4,7µF	20%	35V
2851	4822 121 51387	10nF	20%	16V
2853	4822 126 12882	100nF	20%	50V
2856	4822 121 70619	22nF	10%	50V
2857	4822 126 11585	22nF	20%	50V
2858	4822 122 33848	47pF	5%	50V
2860	4822 124 22726	4,7µF	20%	35V
2861	4822 122 33191	22pF	5%	50V
2862	4822 122 33191	22pF	5%	50V
2863	4822 124 81286	47µF	20%	16V
2869	4822 126 12882	100nF	20%	50V
2870	4822 126 12785	47nF	10%	50V
2890	4822 122 33849	150pF	10%	50V
2898	4822 126 12882	100nF	20%	50V
2899	4822 124 22726	4,7µF	20%	35V

RESISTORS

3720	4822 116 83883	470Ω	5%	0,16W
3721	4822 116 83883	470Ω	5%	0,16W
3722	4822 116 83883	470Ω	5%	0,16W
3723	4822 116 83883	470Ω	5%	0,16W
3724	4822 116 83883	470Ω	5%	0,16W
3725	4822 116 83883	470Ω	5%	0,16W
3726	4822 116 83883	470Ω	5%	0,16W
3727	4822 116 83883	470Ω	5%	0,16W
3728	4822 116 83864	10kΩ	5%	0,5W
3729	4822 116 52195	47Ω	5%	0,5W
3730	4822 116 52283	4,7kΩ	5%	0,5W
3751	4822 116 83872	220Ω	5%	0,5W
3752	4822 116 83872	220Ω	5%	0,5W
3753	4822 116 83872	220Ω	5%	0,5W
3762	4822 116 83872	220Ω	5%	0,5W
3763	4822 116 83872	220Ω	5%	0,5W
3764	4822 116 83872	220Ω	5%	0,5W
3771	4822 116 83883	470Ω	5%	0,16W
3803	4822 116 83864	10kΩ	5%	0,5W
3804	4822 116 52257	22kΩ	5%	0,5W
3807	4822 116 52226	560Ω	5%	0,5W
3815	4822 050 11002	1kΩ	5%	0,2W
3817	4822 116 52283	4,7kΩ	5%	0,5W
3818	4822 116 52239	120kΩ	5%	0,5W
3820	4822 050 11002	1kΩ	5%	0,2W
3825	4822 116 83864	10kΩ	5%	0,5W
3826	4822 116 83864	10kΩ	5%	0,5W
3827	4822 116 83864	10kΩ	5%	0,5W
3828	4822 116 83864	10kΩ	5%	0,5W
3829	4822 116 83864	10kΩ	5%	0,5W
3830	4822 116 83864	10kΩ	5%	0,5W
3832	4822 116 52191	33Ω	5%	0,5W
3833	4822 050 11002	1kΩ	5%	0,2W
3835	4822 116 52264	27kΩ	5%	0,5W
3836	4822 116 52207	1,2kΩ	5%	0,5W
3837	4822 116 83961	6,8kΩ	5%	0,16W
3838	4822 116 52257	22kΩ	5%	0,5W
3839	4822 116 52207	1,2kΩ	5%	0,5W
3840	4822 116 83961	6,8kΩ	5%	0,16W
3841 ⚠	4822 052 10338	3,3Ω		NFR25
3842	4822 116 83864	10kΩ	5%	0,5W
3843	4822 116 83882	39kΩ	5%	0,5W
3844	4822 050 11002	1kΩ	5%	0,2W
3845	4822 116 83882	39kΩ	5%	0,5W
3846	4822 050 11002	1kΩ	5%	0,2W
3848	4822 050 11002	1kΩ	5%	0,2W
3849 ⚠	4822 052 10338	3,3Ω		NFR25
3850	4822 050 11002	1kΩ	5%	0,2W
3851	4822 116 52264	27kΩ	5%	0,5W
3852	4822 050 11002	1kΩ	5%	0,2W
3853	4822 116 83961	6,8kΩ	5%	0,16W
3854	4822 116 83878	270kΩ	5%	0,5W
3856	4822 116 52257	22kΩ	5%	0,5W
3857	4822 116 52234	100kΩ	5%	0,5W
3858	4822 116 52175	100Ω	5%	0,5W
3859	4822 116 83872	220Ω	5%	0,5W
3860	4822 116 52175	100Ω	5%	0,5W
3861	4822 116 52175	100Ω	5%	0,5W
3862	4822 116 52235	1MΩ	5%	0,5W

ELECTRICAL PARTSLIST CD BOARD

RESISTORS

3863	4822 116 83872	220Ω	5%	0,5W
3864	4822 116 52175	100Ω	5%	0,5W
3865	4822 116 83872	220Ω	5%	0,5W
3866	4822 116 83864	10kΩ	5%	0,5W
3867	4822 116 83864	10kΩ	5%	0,5W
3868	4822 116 83864	10kΩ	5%	0,5W
3869	4822 116 83864	10kΩ	5%	0,5W
3870	4822 116 83864	10kΩ	5%	0,5W
3871	4822 116 52176	10Ω	5%	0,5W
3872	4822 116 52175	100Ω	5%	0,5W
3873	4822 116 83864	10kΩ	5%	0,5W
3874	4822 116 83864	10kΩ	5%	0,5W
3875	4822 116 52191	33Ω	5%	0,5W
3876	4822 116 52213	180Ω	5%	0,5W
3879	4822 116 52226	560Ω	5%	0,5W
3881	4822 116 52283	4,7kΩ	5%	0,5W
3882	4822 116 52283	4,7kΩ	5%	0,5W
3883	4822 116 52175	100Ω	5%	0,5W
3890	4822 050 11002	1kΩ	5%	0,2W
3891	4822 050 11002	1kΩ	5%	0,2W
3892	4822 116 52271	33kΩ	5%	0,16W
3893	4822 116 52249	1,8kΩ	5%	0,16W
3895	4822 116 52271	33kΩ	5%	0,16W
3896	4822 116 83876	270Ω	5%	0.16W
3897	4822 116 52213	180Ω	5%	0,5W

COILS

5804	4822 157 53302	1µH
5810	4822 157 11517	10µH
5860	4822 242 10566	CRYSTAL 8.4672MHz

DIODES

6888	4822 130 80655	BZX79-F2V4

TRANSISTORS

7822	4822 130 41344	BC337-40
7877	4822 130 40959	BC547B
7878	4822 130 44503	BC547C

INTEGRATED CIRCUITS

7802 ©	4822 209 12636	TDA1302T/N1	HF PRE AMPLIFIER
7819 ©	5322 209 11517	PC74HCU04T	HF AMPLIFIER
7821	4822 209 16143	LC89170M	CD TEXT
7851	4822 209 32852	TDA7073A/N2	SERVO DRIVER
7852	4822 209 32852	TDA7073A/N2	MOTOR DRIVER
7855 ©	4822 209 31519	TDA7072A	TRAY MOTOR DRIVER
7860 ©	4822 209 12752	SAA7378GP	SIGNAL PROCESSOR

ELECTRICAL PARTSLIST HEADPHONE BOARD

MISCELLANEOUS

1600	4822 267 31453	HEADPHONE SOCKET 6,3mm

CAPACITORS

2603	4822 126 11585	22nF	20%	50V
2604	4822 122 33197	1nF	10%	50V
2605	4822 122 33197	1nF	10%	50V
2610	4822 126 12882	100nF	20%	50V

RESISTORS

3600	4822 101 21199	POTMETER 2x10KΩ		
3603	4822 116 52244	15kΩ	5%	0,5W
3604	4822 116 52206	120Ω	5%	0,5W
3605	4822 116 83864	10kΩ	5%	0,5W
3606	4822 116 83864	10kΩ	5%	0,5W
3607	4822 116 52244	15kΩ	5%	0,5W
3608	4822 116 52206	120Ω	5%	0,5W
3609	4822 052 10109	10Ω	5%	NFR
3611 ⚠	4822 052 10109	10Ω	5%	NFR

INTEGRATED CIRCUITS

7670	4822 209 83274	NJM4560D

ELECTRICAL PARTSLIST SET

MISCELLANEOUS

5001 ⚠	4822 146 11031	TRANSFORMER MAINS not for /01
5001 ⚠	4822 146 11032	TRANSFORMER MAINS for /01 only
	4822 219 10538	RC07105/01 (Remote Control)
	4822 321 22832	CINCH-CABLE

ELECTRICAL PARTSLIST AF BOARD

MISCELLANEOUS

1255 ⚠	4822 071 56301	FUSE T 630mA/250V	
1256 ⚠	4822 071 56301	FUSE T 630mA/250V	
1503	4822 267 31996	CINCH SOCKET DIGITAL OUT	
1504	4822 265 20553	CINCH SOCKET LINE OUT	

CAPACITORS

2250	4822 124 41407	0,47µF	20%	63V
2251	4822 124 11769	220µF	20%	50V
2252	4822 126 11585	22nF	20%	50V
2253	4822 126 11585	22nF	20%	50V
2254	4822 124 11878	4700µF	20%	16V
2255	4822 126 12882	100nF	20%	50V
2256	4822 126 11585	22nF	20%	50V
2257	4822 126 11585	22nF	20%	50V
2258	4822 124 40784	3300µF	20%	16V
2259	4822 124 40849	330µF	20%	16V
2500	4822 126 11585	22nF	20%	50V
2501	4822 124 40433	47µF	20%	25V
2502	4822 124 40433	47µF	20%	25V
2503	4822 121 51387	10nF	20%	16V
2504	4822 121 51387	10nF	20%	16V
2505	4822 122 33519	470pF	10%	50V
2506	4822 122 33519	470pF	10%	50V
2507	4822 124 40433	47µF	20%	25V
2508	4822 124 40433	47µF	20%	25V
2511	4822 124 40433	47µF	20%	25V
2512	4822 124 40433	47µF	20%	25V
2513	4822 122 33519	470pF	10%	50V
2514	4822 122 33519	470pF	10%	50V
2515	4822 124 40433	47µF	20%	25V
2516	4822 121 51387	10nF	20%	16V
2521	4822 124 22263	220µF	20%	25V
2522	4822 124 22263	220µF	20%	25V
2523	4822 121 51387	10nF	20%	16V
2524	4822 124 40433	47µF	20%	25V
2541	4822 124 40242	1µF	20%	63V
2543	4822 126 12882	100nF	20%	50V
2544	4822 126 11585	22nF	20%	50V
2545	4822 121 51387	10nF	20%	16V

RESISTORS

3251 ⚠	4822 053 10471	470Ω	5%	1W
3252 ⚠	4822 053 10471	470Ω	5%	1W
3253	4822 116 52257	22kΩ	5%	0,5W
3254	4822 116 52283	4,7kΩ	5%	0,5W
3255	4822 116 52256	2,2kΩ	5%	0,16W
3256	4822 050 11002	1kΩ	5%	0,2W
3257 ⚠	4822 116 52283	4,7kΩ	5%	0,5W
3258	4822 116 52283	4,7kΩ	5%	0,5W
3260 ⚠	4822 052 10568	5,6Ω	5%	0,33W
3500	4822 116 52289	5,6kΩ	5%	0,16W
3501	4822 116 83864	10kΩ	5%	0,5W
3502	4822 116 52175	100Ω	5%	0,5W
3503	4822 116 52175	100Ω	5%	0,5W
3504	4822 116 52175	100Ω	5%	0,5W
3505	4822 116 52175	100Ω	5%	0,5W
3506	4822 116 52175	100Ω	5%	0,5W
3507	4822 116 52283	4,7kΩ	5%	0,5W
3508	4822 116 52283	4,7kΩ	5%	0,5W
3509	4822 116 52283	4,7kΩ	5%	0,5W
3510	4822 116 52283	4,7kΩ	5%	0,5W

RESISTORS

3511	4822 116 52256	2,2kΩ	5%	0,16W
3512	4822 116 52256	2,2kΩ	5%	0,16W
3513	4822 116 83884	47kΩ	5%	0,16W
3514	4822 116 83884	47kΩ	5%	0,16W
3515	4822 116 52175	100Ω	5%	0,5W
3527	4822 116 52256	2,2kΩ	5%	0,16W
3532	4822 116 83874	220kΩ	5%	0,5W
3534	4822 116 83864	10kΩ	5%	0,5W
3535	4822 116 52289	5,6kΩ	5%	0,16W
3537	4822 116 83872	220Ω	5%	0,5W
3538	4822 116 83872	220Ω	5%	0,5W
3539	4822 050 11002	1kΩ	5%	0,2W
3540	4822 050 11002	1kΩ	5%	0,2W
3541	4822 050 11002	1kΩ	5%	0,2W
3542	4822 050 11002	1kΩ	5%	0,2W
3543	4822 050 11002	1kΩ	5%	0,2W
3544	4822 050 11002	1kΩ	5%	0,2W
3545	4822 050 11002	1kΩ	5%	0,2W
3547	4822 050 11002	1kΩ	5%	0,2W
3548	4822 116 52256	2,2kΩ	5%	0,16W
3556	4822 116 52176	10Ω	5%	0,5W
3557	4822 052 10688	6,8Ω	5%	0,33W
3557	4822 052 10688	6,8Ω	5%	0,33W

DIODES

6250	4822 130 34379	BZX79-C27
6251	4822 130 34174	BZX79-B4V7
6252	4822 130 31878	1N4003G
6253	4822 130 31878	1N4003G
6254	4822 130 31878	1N4003G
6255	4822 130 31878	1N4003G
6256	4822 130 31878	1N4003G
6257	4822 130 31878	1N4003G
6258	4822 130 31878	1N4003G
6259	4822 130 31981	BZX79-C3V9
6260	4822 130 31878	1N4003G
6500	4822 130 30621	1N4148

TRANSISTORS

7250	4822 130 41327	BC327-40
7252	5322 130 60068	BC558C
7500	4822 130 41327	BC327-40
7501	5322 130 60068	BC558C
7504	4822 130 44568	BC557B
7507	4822 130 41344	BC337-40
7508	4822 130 41344	BC337-40
7509	4822 130 41344	BC337-40
7510	4822 130 41344	BC337-40

INTEGRATED CIRCUITS

7251 ⚠	4822 209 80817	L7805CV	5V REGULATOR
7502	4822 209 33252	TDA1549T/N1	DAC
7505	4822 209 83274	NJM4560D	DUAL OP. AMP

ELECTRICAL PARTSLIST FRONT BOARD

MISCELLANEOUS

1800	4822 135 00234	DISPLAY
1810	4822 265 11183	CON. FLEX FOIL 4PIN SIDE ENTRY
1820	4822 276 13114	TACT SWITCH
1821	4822 276 13114	TACT SWITCH
1822	4822 276 13114	TACT SWITCH
1823	4822 276 13114	TACT SWITCH
1824	4822 276 13114	TACT SWITCH
1825	4822 276 13114	TACT SWITCH
1826	4822 276 13114	TACT SWITCH
1827	4822 276 13114	TACT SWITCH
1828	4822 276 13114	TACT SWITCH
1829	4822 276 13114	TACT SWITCH
1830	4822 276 13114	TACT SWITCH
1831	4822 276 13114	TACT SWITCH
1832	4822 276 13114	TACT SWITCH
1840	4822 276 13114	TACT SWITCH
7810	4822 130 10165	GP1U28XP, IR EYE
8002	4822 320 12385	FLEX FOIL 4P 100mm (CD Text)

CAPACITORS

2800	4822 124 22726	4,7µF	20%	35V
2801	4822 124 22726	4,7µF	20%	35V
2803	4822 126 11585	22nF	20%	50V
2807	4822 124 81029	100µF	20%	25V
2808	4822 126 11585	22nF	20%	50V
2810	4822 121 51387	10nF	20%	16V
2811	4822 121 51387	10nF	20%	16V
2812	4822 126 12882	100nF	20%	50V
2813	4822 126 12882	100nF	20%	50V
2814	4822 124 40433	47µF	20%	25V
2815	4822 121 42408	220nF	5%	63V

RESISTORS

3804	4822 050 11002	1kΩ	5%	0,2W
3805	4822 050 11002	1kΩ	5%	0,2W
3806	4822 050 11002	1kΩ	5%	0,2W
3807	4822 050 11002	1kΩ	5%	0,2W
3808	4822 116 52195	47Ω	5%	0,5W
3809	4822 116 52234	100kΩ	5%	0,5W
3810	4822 050 11002	1kΩ	5%	0,2W
3811	4822 050 11002	1kΩ	5%	0,2W
3812	4822 050 11002	1kΩ	5%	0,2W
3813	4822 050 11002	1kΩ	5%	0,2W
3814	4822 050 11002	1kΩ	5%	0,2W
3815	4822 050 11002	1kΩ	5%	0,2W
3816	4822 050 11002	1kΩ	5%	0,2W
3817	4822 116 52257	22kΩ	5%	0,5W
3818	4822 116 52257	22kΩ	5%	0,5W
3819	4822 116 52257	22kΩ	5%	0,5W
3820	4822 116 52257	22kΩ	5%	0,5W
3821	4822 050 11002	1kΩ	5%	0,2W
3822	4822 050 11002	1kΩ	5%	0,2W
3823	4822 050 11002	1kΩ	5%	0,2W
3829	4822 116 52257	22kΩ	5%	0,5W
3830	4822 116 52257	22kΩ	5%	0,5W
3832	4822 050 11002	1kΩ	5%	0,2W
3833	4822 050 11002	1kΩ	5%	0,2W
3834	4822 050 11002	1kΩ	5%	0,2W

RESISTORS

3835	4822 050 11002	1kΩ	5%	0,2W
3836	4822 116 52257	22kΩ	5%	0,5W
3837	4822 116 83884	47kΩ	5%	0,16W
3838	4822 050 11002	1kΩ	5%	0,2W
3841	4822 050 11002	1kΩ	5%	0,2W
3842	4822 050 11002	1kΩ	5%	0,2W
3844	4822 050 11002	1kΩ	5%	0,2W
3845	4822 050 11002	1kΩ	5%	0,2W
3846	4822 050 11002	1kΩ	5%	0,2W
3847	4822 116 52175	100Ω	5%	0,5W
3848	4822 116 52176	10Ω	5%	0,5W
3849	4822 050 24708	4,7Ω	1%	0,6W

COILS

1844	4822 242 72066	CERAMIC FILTER 8,0MHz
5801	4822 156 31058	FILTER DIGITAL OUT
5802	4822 156 21721	2,2µH

DIODES

6801	4822 130 30621	1N4148
6802	4822 130 30621	1N4148
6820	4822 130 31878	1N4003G

TRANSISTORS

7811	4822 130 40959	BC547B

INTEGRATED CIRCUITS

7800 ©	4822 209 16739	TMP87CP71-83780	MICROPROCESSOR